The Art *of* Block Cutting

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There is a growing appreciation of the use and value of block printing. As a commercial possibility in the printing plant, it is only limited by the skill and ingenuity of the printer. This book was prepared to aid those who are seriously interested in this most fascinating handcraft. Inasmuch as an attempt has been made to give a more detailed view of the subject than is usual, it was thought best to include some instructional material on design and color. These two factors are the basis of successful block prints, for without good design skill in carving, the block is of little value; without good color harmony, a good design may be set at naught.

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The Art of Block Cutting

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With Illustrations Designed and Cut by the Authors
and Contributing Artists

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PREFACE

There is a growing appreciation of the use and value of block printing in school and shop. This book was prepared to aid those who are seriously interested in this most fascinating handcraft. The principles set forth are those used in class instruction.

Inasmuch as an attempt has been made to give a more detailed view of the subject than is usual, it was thought best to include some instructional material on design and color. These two factors are the basis of successful block prints, for without good design skill in carving the block is of little value; without good color harmony, a good design may be set at naught.

Block printing has great possibilities in school and shop. As a school problem, it opens the way for artistic self-expression, an appreciation of art principles, and close correlation of art work with the work of other departments. In the shop, the hand tooled block will often help to solve problems of a special nature without much trouble or expense. The use of block printing as a commercial possibility in the printing plant is only limited by the skill and ingenuity of the printer.

Since more and more schools are being equipped with printing departments, portions of the text have been prepared with a view to making blocks for production purposes. The processes of printing by hand and with art room equipment are also presented. The history of block printing can readily be gleaned from the books listed in the bibliography and was therefore not included in this book.

The authors wish to acknowledge sincere appreciation to the students, teachers and artists who have contributed suggestions and blocks. The name of the designer and the block material used is given under the illustrations. The block prints are exact size except where a change in scale is noted.

Acknowledgment is made to: Miss Marjorie Blatchley, Mr. Fred Ernst, Mr. Ralph Graber, Mr. Orville Romine, Mr. A. E. Smith,

for examples used in Plate VI. Acknowledgment is also made to Miss Mamie Engle, Art Instructor in the Department of Home Economics at Kansas State Teachers College of Pittsburg, for several examples of illustrations, Fig. 33, Fig. 34 and Plate V. Also to Miss May Lampe, East Orange, N. J., for illustrations on wood and artcraft blocks; Mr. John Quincy Steinbach, Chicago, for hand tooling artcraft blocks; Mr. Antony N. Visco, New York City, artistic engraver of the old school, for wood cut made especially for this book, and for offering valuable information in the art of wood engraving; Stanley Rule and Level Company, New Britain, Conn., for wood cuts made forty years ago for their catalog; Republic Engraving Company, Chicago, Ill., for the color plates cut in parra; Parazin Printing Plate, Rochester, N. Y., for four-page insert with illustrations cut in parazin, showing water-color printing; Mr. Fred T. Larson, for engraving in parazin and in wood; Miss Dorothy Valentine, Northern Illinois State Teachers College, for linoleum block; Miss Margaret R. Schauffler, assistant professor of fine arts, Oberlin College, for linoleum block; Master Dave Singer, student in Marshall High School, Chicago, for linoleum block; Mr. C. H. Waller, Wausau Vocational School, Wausau, Wis., for linoleum block; Master Robert Lundgren, print shop student, and Master Roy Prange, art student, Calumet High School, Chicago, for linoleum blocks.

It is sincerely hoped that this book will serve as a useful tool to both teacher and journeyman in the art of block printing.

THE AUTHORS.

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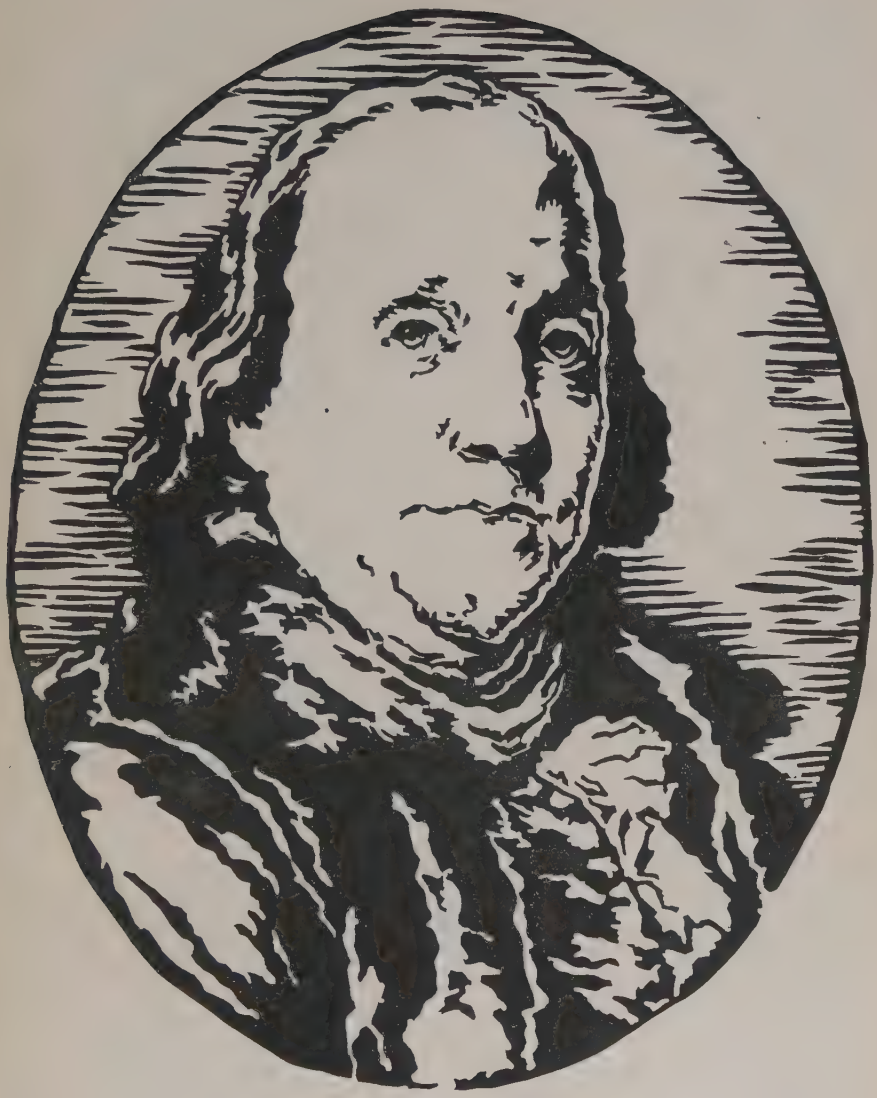


Artcraft Composition O. A. Hankammer

F. C. Lampe

CHAPTER ONE

CHAPTER I

Tools and Supplies for Block Printing

Block cutting and printing require less equipment than any of the handcrafts. One can cut blocks with a pen knife, but nothing is gained by using so limited equipment. The good craftsman will not handicap himself by lack of good and adequate tools. A careful study of any craft will show that the kind of materials and tools used have vitally affected the results in the finished design. So it is in block cutting, the gouge giving a line of different character than the line cut with a knife.

A large variety of tools and printing materials is to be had. From the following described equipment one may select those items which will be necessary to carry on the art of block printing.

Block Materials

1. Linoleum: Select the best grade of battleship linoleum. The quarter-inch thickness should be used as this permits the cutting of a deeper non-printing surface in the areas to be routed away. Inlaid or glazed linoleums are unsatisfactory for block work.

If the linoleum blocks are to be printed in a printing press, they must be mounted on wood. The mounted block should be type high. (Approximately 7/8 inch, exactly .918.) To "mount" the linoleum, the board or block should be planed smoothly first, then coat the board and the back of the linoleum with glue and place in clamps or beneath heavy weights. Let the glue set or dry thoroughly before removing the block from the clamps. It is more satisfactory to purchase the ready-made blocks. They are no more expensive than the

materials necessary to make "home-made" blocks and have the added advantage of being mounted securely on blocks of correct size for fine register printing.

2. Parra: This material, unlike linoleum, does not have any grain. It takes ink more readily than linoleum, but requires a somewhat different cutting technique than the linoleum. The cutting is best done with a sharp pointed knife rather than with the gouge. As its name indicates, the rubbery quality causes the material to creep slightly under the pressure of the gouge making it a bit difficult to determine what the exact cut will be when the pressure is relieved. Parra makes splendid tint blocks, and may be had either mounted or unmounted.

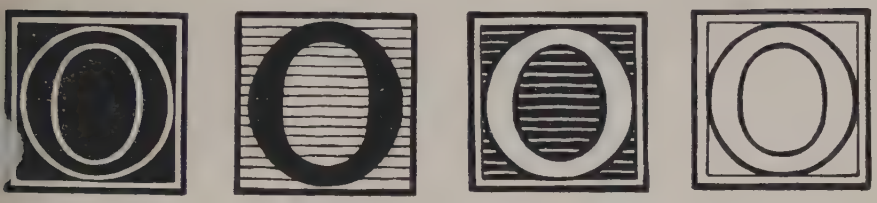
3. Artcraft Composition: Of the various hand tool engraving materials to be had, artcraft composition stands without an equal. It is a firm, yet easy, cutting material which makes it possible to cut fine lines without having any fear that they will break down under the process of printing. This material will take pencil, ink and water colors. It does not require any special preparation of the surface in order to transfer the design. Unlike parra, artcraft composition is not affected by climatic conditions. It is an ideal material for tint blocks in that it requires less ink than linoleum blocks, and will print on fabrics as well as on paper. This material comes mounted or unmounted.

3A. Parazin: Its surface is firm and smooth, easily engraved, and as the material is vulcanized to the base it should be a safeguard against shrinkage.

4. Wood: Wood engraving was rapidly replaced with the advent of photoengraving. However, as a means of artistic expression, wood still offers a medium to the skilled "wood-cut" artist which cannot be replaced with any other. Various kinds of woods, such as boxwood, cherry, maple, and a few softer woods are used. Usually, for the finer lined work, boxwood or end-grain maple is used. Beautiful prints can also be obtained from "cuts" made from

side grain. Type-high blocks come with a highly polished surface upon which the design may be photographed or drawn.

There are four different techniques in wood engraving from which variations and combinations can be made. The simplest is shown in illustration A, with the white lines on a black background. Figure B shows a tinted or shaded background. Figure C is the reverse of B, and Figure D opposite treatment of A. To clear away the wood as shown in C and D a scorper is used.



A B C D

Lampe

5. Celluloid: This material comes in sheets of such thickness that it may be mounted on blocks. It can be engraved somewhat in the manner of wood. There is a tendency to have slight burrs form along the engraved lines.

6. Patent Leather: As an occasional last resort material, patent leather may be used for a printing surface. A slight grain in some pieces gives a rather interesting pattern when used as a tint block.

7. Ivory Soap, Potatoes, Etc.: Such materials, from their nature, are not permanent, and cannot be put under pressure. They lend themselves, however, to school work where the lesson is one of design rather than the making of many or elaborate prints.

Tools

8. Knife: A mat or stencil knife is the most satisfactory knife for carving blocks. A pen knife, sharpened to a long slender point may be used. Good knives for linoleum and parra cutting may be

made from old hack-saw blades. Such blades hold an edge and can be shaped into splendid cutting points. To make such a knife comfortable to hold, a handle should be added. This may be done by fitting a thin strip of wood along either side of the blade and then wrapping the length with friction tape. Old razor blades, especially those with a back, may be used. The double edged blades should be inserted in a holder or be taped in order to prevent injury to the fingers.

9. Gouges: Sets of gouges especially designed for block engraving are recommended. They usually consist of four tools, one 1/16-inch veiner, one 1/8-inch gouge, one 3/16-inch gouge and one 1/4-inch gouge. The tools having regular graver handles are the most desirable type as they fit the hand properly and will not roll off the table when laid down. The cutting shape may be either U or V. It is desirable to have both shapes and in various sizes. Wood carving tools, in the smaller sizes, will answer the purpose for much of the work done in linoleum cutting. A fair gouge can be made from an umbrella rib. The German "pen" gouges make good sets of carving tools for school use. A set consists of two V and two U gouges, one knife, one handle and a tool for removing the gouges from the handle. Their cost is within the reach of all. The Lampe tools are the best to be had for fine line work.

10. Gravers: To make "wood-cuts" it is necessary to have a set of tools designed for this type of work. A set usually consists of ten tools. Six are known as tint tools, three as spit-sticks, and one as scorper. The tint tools cut lines of uniform width such as lines in a tint or shade. The spit-sticks permit the broadening of lines when pressing the point deeper into the wood. They have rounded sides. Some use tools known as gravers instead of spit-sticks. The gravers have flat sides, similar to tint tools, but of greater spread. The scorper is of greatest width and is used to clear away the wood around the engraving. In addition to the tools mentioned, it would be advisable to have a mallet and a gouge, to be used as a chisel, for clearing away the wood around the engraving. Those doing

wood cuts will find a sandbag and a magnifying glass with stand (if eyesight is defective) very valuable accessories.

11. Slip Stones: Tools must be kept sharp. Use fine grain stones and give careful attention to the sharpening of knives and gouges. Knives should be kept with needle sharp points and gouges should cut leaving smooth edges. Gouges having nicks should be ground down and finished with a fine slip stone. Do not grind away the inside of the gouge. Just touch it with the slip stone enough to remove any slight "feather edge" that may appear. Time spent in thoroughly sharpening tools will be more than regained in the rapid cutting of blocks. The danger of spoiling a block is in direct proportion to the dullness of the tool.

Colors

12. Printing Inks: The most satisfactory colors for the printing of blocks are printing inks. These may be purchased through printers' supply houses or a local printer. A good quality of cover ink gives the best results when printing from linoleum blocks. Printing inks can be mixed to produce any tint or shade desired. If too heavy, they may be thinned with reducing varnish. Many of these inks are sun-fast and washable. This is a point to be noted when block printing fabrics which are subject to laundering. Water color printing inks may also be had.

13. Oil Colors: Tube colors come in a vast variety of colors. Some of these colors are quite permanent, others are quite fugitive. Tube colors can be thinned with oil, turpentine or gasoline, and be mixed to give any color desired.

14. Water Colors: These colors come in two classes, namely, tempera or poster colors and transparent water colors. Tempera colors give a brilliant and opaque colored surface. They make an excellent form of coloring material for school use, handling them much like oil colors, yet without some of the difficulties inherent in oil colors.

15. Brayer: When printing by hand, colors with a body, like printing inks, are most easily applied to the block with a brayer or

rubber roller such as is used in mounting pictures. The ink should be mixed and rolled out upon a marble slab or sheet of heavy glass. A piece of white paper under the glass makes it easier to see the results of mixing. Nothing is better than a palette knife for mixing inks. Care must be given the brayer to keep it clean, and when not in use it should be hung up to prevent it from becoming lopsided. Brayers are sensitive to atmospheric conditions and may become soft and sticky in a hot room or in hot weather.

16. Cleaning Materials: A supply of rags and gasoline make the job of cleaning blocks after printing a short one. Cleaning should be done upon old papers to prevent colors smearing the school desk or table. Carefully dispose of all cleaning materials in order to prevent fire hazards.

Papers

17. Drawing Papers: These papers come in many grades and finishes. A reasonably firm paper which takes ink readily is the most desirable in working out the preliminary drawings of the design to be cut into a block.

18. Tracing Papers: Drawings can be made upon tracing papers and used directly upon the block. Thin "rice" papers, extra thin bonds, vellums and parchments are suitable for this purpose.

19. Carbon Papers: The standard carbon papers or a paper coated by rubbing it with a blue pencil can be used for copying and transferring.

20. Printing Papers: The most satisfactory way of determining printing papers is to examine and test samples. For art prints, many hand made papers are to be had. The deckle edge on paper is often employed to aid in giving distinction to a piece of printing. Japanese papers can be used to good advantage in block prints as they have a beautiful texture as well as a good range in color effects. Construction, book, and cover papers, and the so-called novelty papers, give an almost endless variety from which to choose. It is a good rule to select antique-finish papers for all block printing. The

character of linoleum cuts and similar block work is such that it will harmonize with the soft, rough-finish papers. Hard-finish papers seem to make block prints have a look of crudeness. Prints on the smooth papers will also offset easily, that is, the ink will be transferred from the lower sheet to the back of the sheet next above.

20A. Glazine Paper: For transferring from the key block to other blocks for color plates.

Presses

21. Hand Press: A small hand press, with which considerable pressure can be applied to the block, is available for studio and school room use.

22. Pilot and Ideal Hand-lever Presses:* The names are given to small platen presses operated with a hand lever. Each is a regulation printing press which will take small or medium size type-high blocks.

23. Letter-press: If no printing press is to be had, an ordinary letter-press can be used in securing prints. The paper to be printed should be laid upon a pad of papers having as a foundation a smooth board. The inked block is carefully placed face down upon the sheet. The whole assembly is put in place and the press is screwed down until a firm impression is given. By reversing the method, the block may be placed in the press and the paper to be printed is then carefully laid upon the inked face. This sheet is padded with papers and then given the impression.

24. Clothes Wringer: This device is sometimes used in securing prints when no press is available. Tables should be built up on either side of the wringer so as to bring their tops slightly below the top surface of the bottom roller. Blocks should be unmounted and held securely in a cardboard frame which is fastened between a back and cover. The paper is laid upon the inked face of the block with the lower and left edge of the sheet in contact with small register blocks. When the cover is lowered, the whole assembly

* For equipment used with presses, see the appendix.

is ready to pass through the wringer. Apply just enough pressure to give a good print.

25. Etching Press: Some art departments have an etching press. It may be used in printing blocks. The method of printing is much like printing with a clothes wringer.

26. Washington Proving Press: For large designs, or color prints which require accurate register and even impression, the Washington press is probably the most satisfactory. A surface pattern printed by repeating the block can be accomplished on this press.

General Drawing Materials

27. Pencils: Drawing pencils which respond to the touch and give a good quality of line for the work in hand should be used. Cheap and gritty leads should be avoided.

28. Pens: Common and shoe-tipped pens with holders should be found in the kit. The smaller round shoe-tipped pens are excellent for the development of designs to be cut on blocks. They prevent the drawing of a line which is too fine to cut in linoleum and kindred materials.

29. Ink: Black waterproof drawing ink is the best medium for the drawing of block designs. Colored inks may be used to indicate the colored areas when preparing tint blocks.

30. Chinese White: An opaque white is used upon the surface of linoleum to make the transferred design show up clearly. It may also be used effectively in working out designs upon black paper.

31. Brushes: Several small brushes will be found convenient in the filling in of areas with ink or white. Flat sable brushes are used to paint the colors on the color-blocks when working for gradations.

32. Scale: A scale or ruler is necessary when definite sizes are to be determined.

33. Steel Square: A small steel square is essential in squaring blocks and cutting register marks.

34. Erasers: For cleaning a drawing, the soft white rubber or art gum is good. Erasers leaving streaks of color are a nuisance.

35. Thumb Tacks: A good stock of this small, but useful, item should always be at hand.

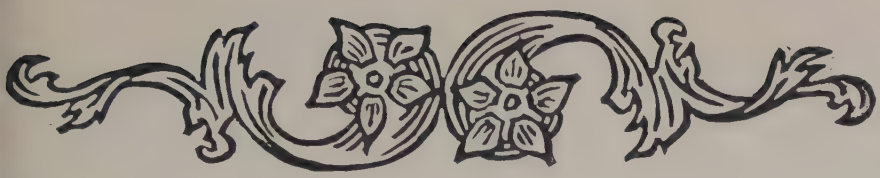
36. Paste or Glue: A good adhesive, without lumps, is necessary when mounting a design on the block.

Most of these items are found in any art room or in the craftsman's kit and therefore need not be looked upon as a special layout for block printing. Elaborate equipment is not necessary, nor is it any guarantee of fine work. Good equipment, however, is a convenience and a time saver, and in the hands of the competent may be used to give special character to the block print.

Hard Rubber J. Q. Steinbach

DESIGN

CHAPTER TWO



CHAPTER II

Design and Lettering

37. Decorative Design: Block prints of merit are the result of carefully planned areas, shapes, and colors. There is no more important phase in the art of block printing than that which deals with the preparation of the design. The designing process is the orderly assembling of such elements as will produce a harmonious unit which is suitable to a particular purpose. This process may be the arranging or shaping of materials into a piece of furniture or jewelry. It may be the selection and arrangement of floral elements into a pattern suitable for wallpaper or a fabric. In any case, the successful designer frankly acknowledges the limitations of the medium with which he is working. Each medium has its characteristic form of design and nowhere is this exemplified more clearly than in the designing of printing blocks.

The nature of the linoleum block and similar materials demands that the design be bold. The lines must be strong and the detail be kept at a minimum. This does not imply that crudeness or coarseness are characteristic features of block prints. Rather, it means that the student must school himself to work for simplicity and economy in design. In the beginning, it might be well to work up blocks having broad, simple masses as in Fig. 1. The silhouette (Fig. 2), also makes a splendid type of work for a beginning in block designing.

In the development of decorative designs and prints, the designer may resort to photographs (Fig. 3), sketches from nature (Fig. 1, Plate I), clipping file, or his mental images (Fig. 4),

for ideas and suggestions. The design must be made full or exact size and should be conventionalized. To make a conventionalized design, small details are omitted or merged into larger masses. Should the motif of the design be, for example, a flower, accidents of growth and minute details would be lost though the design as a whole would retain the general characteristics of the natural form. The process of conventionalization or simplification may be carried on to such a degree that the form takes on a geometric shape or becomes an abstract design (Fig. 5).

Conventionalized forms derived from nature may be divided into two classes, namely, informal and formal. The informal design (Fig. 6) is decorative in shape and arrangement with receding planes or perspective effect. The formal design (Fig. 7) is also decorative in shape and arrangement, but apparently lies in a single plane or has no perspective effect. The process of simplification may be applied not only to plant life but also to landscapes (Fig. 8), animals (Fig. 9), insect life, and the human figure (Fig. 10).

38. Decorative Ornament: Design for block prints are usually prepared with a view to applying blocks in the enrichment of surfaces or to produce decorative pictorial prints. If decorative ornament is the problem in hand, the design is worked out as a unit. The use to which the unit will be put will largely determine the system of application. Should the unit be a free ornament (Fig. 11), as a decorative spot in a panel, it must be complete in itself. A second method of arrangement is in the form of bands and borders (Fig. 12). A common example of this arrangement is the block printed border or band on curtains. Bands and borders may be made by simple repetition of a unit in which the unit may be complete in itself or be dependent upon repetition to form the complete pattern. In a third system of arrangement, the unit is repeated so as to cover the entire surface. The repetition may be made by placing units in vertical rows (Fig. 13), placing units in horizontal rows (Fig. 14), placing units in oblique rows (Fig. 15). The units may be dropped any fraction of the unit height to prevent "rows." Any design which

is repeated over unlimited areas is called a repeat, diaper, all-over, or surface pattern. Wallpaper is a typical example of surface pattern designing.

To carry out successful decorative designs there should be an easy flow of line from one part to another. Disassociated spots or disjointed elements should be woven together into a rhythmic mass. Symmetry is a great aid in bringing units into a well balanced design. Designs may be balanced though not symmetrical. Such a form of balance is spoken of as occult, hidden, or non-symmetrical. Japanese prints offer many examples of non-symmetrical balance.

Those principles which have to do with the orderly arrangement of the elements of a design are repetition, alternation, variety and contrast. This last principle, variety and contrast, help to prevent monotony in a design. Monotony may also be prevented by making some portion dominant. All designs of strength have some dominant note or feature with the remaining portions subordinate yet supporting the principal portion of the design. Dominance may be gained through size, shape, position, or color. The most fundamental principle of design, however, is unity. Unity will make for harmony. Harmony will make itself manifest when all parts in the design are properly adapted to one another and to the thing being decorated.

The development of any design should be an outgrowth of the project to be decorated. The process of conventionalization should be determined by a definite objective to be achieved. The application of the design to any given material should show the completed project as a harmonious whole. The design which fully meets the requirements in block printing will be appropriate, good in proportion and color, pleasing in shape and position.

39. Decorative Pictorial Art: The pictorial block print records facts or ideas in a decorative way. To produce artistic prints calls for a skill and judgment worthy of the efforts of any artist. Nature supplies the creative worker with the raw materials from which he builds his design. To build this design is not the simple

task of devising a unit which may be expanded into an ornamental pattern by the process of repetition. It requires a skillful handling of many elements. It may require a play of light and shade, the suggestion of atmospheric effects, or a feeling of distance. All these elements must be combined into harmonious groups within the confines of a limiting border.

Decorative block prints require the planning of significant masses. There can be no niggling. The shape and proportions of the boundary line will give a "set" to the design which cannot be ignored. The lines of the composition should lead to a principal mass or point of interest. Intense blacks or whites, the converging lines of perspective, contrasts of large and small, or other devices, may be used to give a dominant note to the design. The point of interest may be placed near the center of the composition, but rarely will the results be satisfactory if placed in the exact center. In a landscape design, the horizon may be used to divide the rectangle into unequal areas. A dividing line one third or less of the distance from either top or bottom will give pleasing proportions. A rhythmic radiation of line and a feeling of balance of masses is found in the decorative pictorial design as in the decorative ornament. Contrasts and proportions may be interesting without being violent, and withal, fit as a unified pattern within the boundaries of the shape first determined upon.

Designs, often based upon sketches (Fig. 1, Plate I), may be treated in various ways. The method selected depends upon the effect the artist may wish to secure. The beginner will probably find the silhouette (Fig. 2, Plate I) the easiest form to render. His problem consists entirely of placing solid blacks on a white ground. The effect is dependent on the contours and shapes of the masses. Only contours which are strongly characteristic of the object should be selected. The sky-line of a city or the profile of a face will give the beginner a more satisfactory block design than any perspective or halftone effect he might draw. Occasionally a white line may be added to the black silhouette in order to define a shape within the

mass. A dense black area may be lightened by a well placed white spot. The introduction of white into the black silhouette, however, must be carefully planned in order to prevent the design from becoming a weak and speckled affair.

As a preliminary to making the block, it is well to work out the silhouette effect with white crayon or white poster paint on black paper. The general principles of designing the black silhouette apply also to the designing of the "white" silhouette (Fig. 3, Plate I). By combining the black and white silhouette effects, a third form of treatment (Fig. 4, Plate I) may be devised. The combination of black and white gives a greater opportunity for decorative representation but increases the problem of mass disposition. One part must be set off against another through the placing of white against black and black against white. Roughly, the total areas of white equal the total areas of black. The decorative effect may be strengthened by lining the black areas (Figs. 1 and 2, Plate II).

Silhouette effects deal largely with masses. Obviously, blocks may be cut with a line treatment. The line treatment (Fig. 3, Plate II) gives a representation of the most common form of drawing, that of the black line on white paper. The black line in block prints should be decidedly heavier than the line of the drawing. The heavier line has a more decorative quality. Usually the fewer the lines the heavier they should be. Thin lines give block prints an "aenemic" look. Line treatment may be accented and enlivened to good advantage by a judicious introduction of spots of black.

The white line (Fig. 4, Plate II) is probably the most natural line for a block since one need but push the gouge through the surface of the block to produce it. To keep the line pure, each line is definitely placed and comparatively free from others. This form of treatment permits of direct drawing on the block with the gouge and thereby giving a freshness to the work which is often lost in the other methods. The student may find that the lines look thinner in the large background of black than had been anticipated.

Some subjects do not lend themselves to silhouette or line treatment. This is especially true where modeled effects or tone grada-

tions are desired. Tone gradations may be secured through line or stipple work. In cutting grays or halftone effects, the gouge follows the normal direction of line of each particular part in the composition. It is best to keep the masses of black, white, or gray grouped. The error in cutting varying tones lies usually in cutting too much away or in spotting the work.

Light and shade may be effected without the use of halftones. Brilliant lights and deep shadows will give a broad and poster-like effect of characteristic shapes. By carefully preserving the blacks or shadows on the block, form may be given without any intermediate tones (Fig. 16 and Frontispiece).

The final results depend upon the skill with which the design was prepared. To the student who wishes to experiment for effects or work out a unique treatment of a subject, block designing and cutting will give a great opportunity. When the treatment is broad, linoleum and similar materials may be used. As knowledge of block work is acquired and skill is gained, still greater problems may be solved by working over into the field of wood engraving. This medium permits the finest line and most subtle gradation of tones. To appreciate the remarkable work that can be done on wood, the student should study modern wood-cuts as well as the masters of old.

40. The Drawing: Designs for block cuts may be drawn directly upon the block. It is usually more satisfactory, however, to prepare a drawing showing exactly how the print should look when finished. Preliminary sketches may be made in pencil, charcoal, or colors and then be traced on a sheet of tracing paper or thin tissue. The work, when rendered in ink, is best done with a small brush or with one of the smaller round shoe-tipped pens. These pens give a broad line which is easily cut into the block. Lettering can be done rapidly and neatly, and, above all, boldly, which is so desirable in block designs.

Decorative units or repeat patterns may be developed quickly by the aid of a mirror set on edge at right angles to the drawing paper. Small steel mirrors are excellent for this purpose. The

reflection will show the opposite half making a symmetrical design. By moving the mirror back and forth or rotating it, a great variety of designs may be composed without any lengthy process of drawing. Symmetrical and repeat units may be readily transferred into any position from a tracing of the basic unit. An aid to designing is the strong outlining of simple masses. Details are merged into the larger areas. If the unit is not pleasing in itself, it may often be improved by adding its reverse, that is, make the design bilateral or a "twin" unit. In such units the background shape is as important as the unit itself. If necessary to fill a given space or geometrical shape, the unit should be adapted to the particular place through consistent change of detail and harmonious shaping to the area to be decorated.

41. LETTERING: A great many designs contain lettering. Lettering is introduced in order to be read rather than as a mere decorative feature. It must therefore be legible. It should also be beautiful and reflect the spirit of the work in which it is found. In other words, lettering should harmonize.

Hand lettering has a rich historical background. It has come down to us in various shapes and forms. The most legible form, and at the same time the most beautiful, is the Roman letter with its thick and thin elements and serifs. This letter, unfortunately, is more difficult to cut into block designs than the so called Gothic letter or sans-serif Roman (Plate IV). For this reason, lettering on blocks is often of the Gothic form in which no serifs appear and all elements are kept of the same thickness.

Text forms (Plate IV), as "Old English," are used on such work as Christmas cards. Text is difficult to cut, due to the many thin elements. It is also illegible. Missal letters (Plate IV) give an effect similar to text, but they are not as difficult to cut. Letters may also be drawn at a slant as in italic. When simulating hand writing, the lettering is termed script. All lettering may be grouped under one of these five forms: Roman, Gothic, Italic, Script, and Text (Fig. 10, Plate III).

Lettering for blocks, if cut into linoleum and similar materials, should be made large enough that the character may be shown in correct detail. Obviously, lettering may be done either in the capital letters or in the small letters. The printer speaks of this as "upper and lower case." Upper and lower case letters are not mixed, except where capital letters are needed as initials. Those not acquainted with the shape of the individual letters in the various forms may find Plate IV helpful. The alphabets given in this plate are suggestive of shapes which will lend themselves to block cutting.

Lettering may be done directly with the pen or brush (Fig. 1, Plate III). Such letters have distinct characteristics due to the implement used. Rapid and uniform letters can be drawn when the limitations of the pen or brush are observed. Broad pens and certain brushes give thick and thin elements (Fig. 2, Plate III) which characterize the Roman letters. Other types of pens and brushes are made to produce a uniform thickness or width of line. It is advisable to draw guide lines (Fig. 3, Plate III) for all lettering. Letters which are built up (Fig. 4, Plate III) rather than drawn directly are first laid out carefully with pencil, then outlined with ink and finally filled in. The entire composition should be roughed in, or "blocked in," in order to determine the spacing. Adjustments in spacing should be made at this time. The composition of the lettering in the design is more important than perfection of the individual letter. Approximately the same area of white should surround each letter in a given word (Fig. 5, Plate III). Special care should be given the serif (Fig. 6, Plate III) as it is a prominent factor in determining the character of a letter.

Hand lettering permits of great modification in letter form (Fig. 7, Plate III). There are, however, limits to the degree a letter may be condensed or extended; to which its elements may be lengthened or shortened. Because of their flexibility when drawn, letters may be made to fill a space more uniformly and of a larger size than type. This flexibility is not to be abused, especially to the extent of making letters so eccentric as to destroy their legibility.

When combining type and hand lettering, from the point of view of design, there should be harmony between the two forms. Lettering combined with modern type should have the characteristics of modern type (Fig. 8, Plate III). The sharp serif and straight lines are the marks of this style. In contrast, we have old-style type. This form has the rounded serif and "freehand" appearance (Fig.

Fig. 1

Linoleum O. A. Hankammer

9, Plate III). In any case, whether the letter be modern, old-style or transitional in form, the lettering must be an integral part of the design. To be successful, lettering can never be treated as an after thought.

The lettering on a block may be cut in relief (Fig. 17 and Fig. 18) or it may be cut intaglio (Fig. 19 and Fig. 20). It is easier to cut the incised letter. Such letters may also be lighter in weight than those cut in relief. The white letter on a black background always looks thinner than the black letter on a white background.

For the development of problems in design, probably no medium lends itself better than the block. The inherent quality of the linoleum block and similar materials requires that the work be treated broadly and boldly. This makes for simple but well chosen patterns. It holds the student rigidly to the task in hand. To work out a design, cut it into the block, and then see the design in the printed form makes block designing a most fascinating art.

Fig. 2

Parra O. A. Hankammer

Fig. 3

Artcraft Composition

O. A. Hankammer

Fig. 4

Artcraft Composition — O. A. Hankammer

Fig. 5
Linoleum

Fig. 6

Artcraft Composition O. A. Hankammer

Fig. 7
Linoleum

Fig. 8
Linoleum O. A. Hankammer

Fig. 9

Linoleum M. Engle

Fig. 10

Linoleum

O. Romine

760
#241
11158

Fig. 11

Fig. 12

Alverno College

Fig. 13

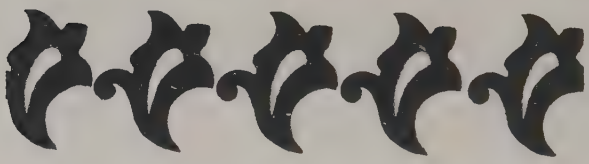


Fig. 14

Fig. 15

Fig. 16

Linoleum F. H. Ernst

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Plate I

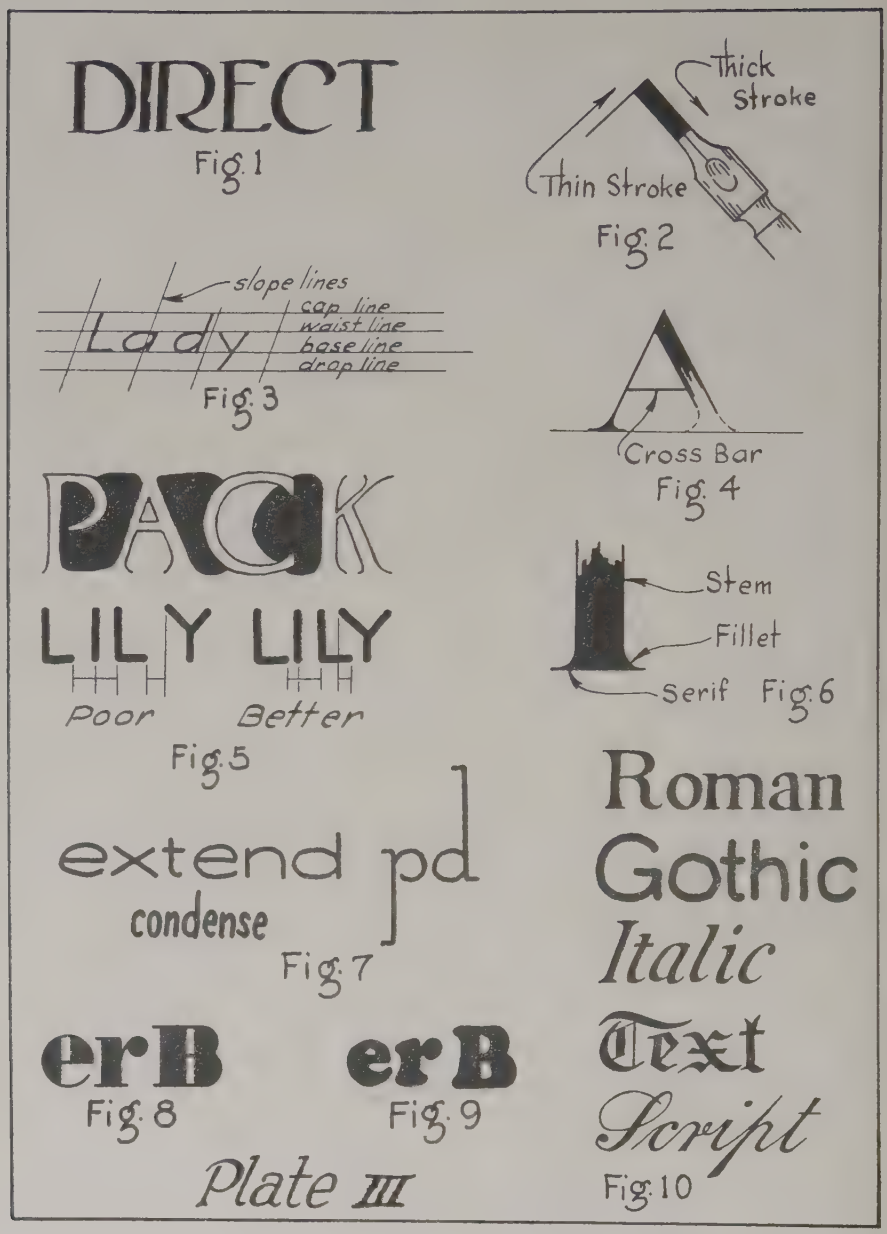
Fig. 1

Fig. 2

Fig. 3

Fig. 4

Plate II


DIRECT
Fig. 1
Thick Stroke
Thin Stroke
Fig. 2
slope lines
cap line
waist line
base line
drop line
Lady
Fig. 3
Cross Bar
Fig. 4
PACK
LILY LILY
Poor
Better
Fig. 5
Stem
Fillet
Serif
Fig. 6
extend pd
condense
Fig. 7
Roman
Gothic
Italic
Text
Script
Fig. 10
erB
Fig. 8
erB
Fig. 9
Plate III

12 Point Publicity Gothic

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqurstuvwxyz

12 Point Advertisers Gothic

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

14 Point Gothic Modern

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

12 Point Adcraft Black

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

14 Point Cooper Black

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

18 Point Missal Text

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

14 Point Engravers English

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Plate IV

Fig. 17

Artcraft Composition O. A. Hankammer

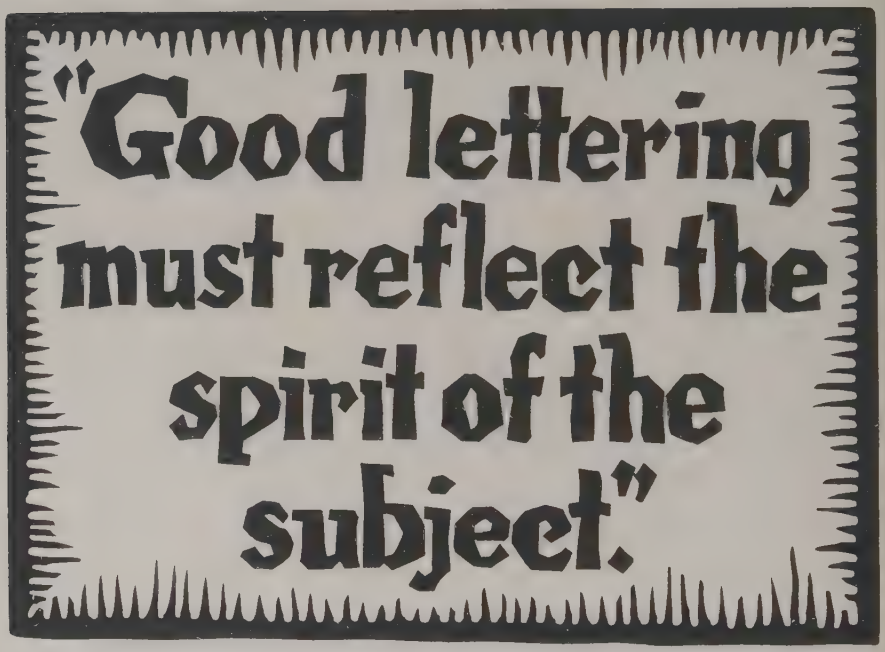


Fig. 18

Artcraft Composition O. A. Hankammer

Artcraft Composition O. A. Hankammer

Fig. 19

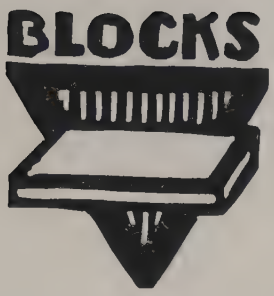
F. C. Lampe

Artcraft Composition

Fig. 20

O. A. Hankammer

Endgrain Maple F. C. Lampe



CHAPTER THREE

CHAPTER III

Transferring and Cutting Processes in Block Designing

42. Transferring: After the design has been drawn exactly as it is to appear in the finished print, it is ready to be transferred to the block. If the design is to be cut in linoleum, the linoleum should first be cut to size. The mounted block is sawed square while the unmounted linoleum may be brought to size by cutting through the canvas back and then bending toward the linoleum side. The carving may be done on either mounted or unmounted linoleum.

The surface of the linoleum may have a slight grain. Such grain will show in the print, especially if the block is not inked heavily. In certain prints this natural grain is quite effective. However, if a smooth surface is desired, the linoleum should be sanded by rubbing over a sheet of fine sandpaper which has been spread out on a flat surface. The corners and edges of the block must not be sanded off. Shellacking the surface or allowing the ink to dry on the block will also give a smooth printing face.

By drawing directly upon the block much time is saved and designs often retain a crispness of line which may be lost in the process of tracing and transferring. The main difficulty, for the beginner, with this process lies in the fact that the design must be drawn in reverse. Special care must be given when the design contains lettering, as each letter as well as the whole composition must be reversed. The principle is the same as in type.

The beginner particularly will find some of the following methods of transferring a prepared design to the block more satisfactory than attempting to work directly upon the block. The design may be transferred to a block by slipping a sheet of carbon or transfer

paper under the reversed drawing or tracing of the design and tacking the whole assembly to the block, then going over the entire design with a hard lead pencil. The design must not be removed until all parts have been traced. If the block is the gray linoleum, the carbon may show clearly enough to fill in the design. The design can be made to stand out more distinctly by first treating the linoleum with a wash coat of Chinese white or white sho-card color. The following mixture makes a satisfactory white for this purpose, and is inexpensive. Mix 3 ounces of white lead and 1 ounce of zinc oxide with about a tablespoonful of mucilage. Add a few drops each of glycerine and alcohol. Grind thoroughly by mixing the paste on a slab with a spatula. Thin the mixture with water to the consistency desired.

In case the drawing does not show clearly through the paper, the face or drawing side being down to produce the reversed transfer, the paper may be oiled to make it more transparent. After transferring the design, the block should be inked in with drawing ink. The areas which print should be filled in with ink while the portions which are cut away remain white. This procedure is always to be followed regardless of the method of transfer. To do so prevents mistakes in cutting. To cut a new block will take more time than inking in a design.

A transfer can be effected by dusting the drawing with chalk. Upon tracing, a white line is deposited. Chalk is sometimes used on the block instead of white water color. In either case, chalk will not be found very permanent or distinct.

The method of making a soft lead pencil tracing and then rubbing the back of the tracing with a smooth object as the bowl of a spoon is used by some. This will give clear lines when properly done. For artcraft composition, this method is a very satisfactory one.

Still another method of transferring designs is through the use of hectograph ink or printing ink which has been mixed with oil.

These inks are slow drying. A tracing or drawing done with them will leave a distinct print upon the block without hard rubbing. The lines of the design may spread somewhat with the use of hectograph ink.

A common method of putting the design upon the block is to paste the drawing face down on the block. In this case the drawing should be made upon thinnest tissue. Either paste or glue may be used. Care must be given in spreading out the drawing smoothly that it is not torn or wrinkled. To aid in seeing the lines, the paper may be oiled. After the design has been cut, sponge off the surface of the block with water and dry. This removes any particles of paper that were left after cutting the design.

Designs may be transferred to other materials in a manner similar to the methods used on linoleum blocks. To make transfers on artcraft composition or parra, the soft lead tracing or drawing is simplest. It is not necessary to prepare the surface of these materials with white. The pencil work on the block should be inked in. It will not be obliterated then during the cutting process. Lines on parra block may be traced with an awl or scratcher instead of ink. This leaves permanent white lines which need not be filled in with ink.

No designs can be transferred to potato and similar materials. All work must be done directly and boldly. Designs are also rather difficult to transfer to celluloid. The process of painting the design directly upon the surface will be found convenient.

A little difficulty may be found in placing the design upon a wood block as the surface is highly polished. In working directly on the block, pen and ink may be used with good results, but if a pencil or brush is to be used, it would be well to apply flake white and ground brick dust in equal proportions, mixed with a few drops of water, spreading it thinly over the surface. Use a medium hard pencil and do not press too hard, as the wood may be bruised. If the design is to be transferred from a drawing, a tracing is made upon thinnest Japanese tissue with waterproof ink. This tracing is

pasted upon the block by coating the block with starch paste and then pressing the block upon the tracing. Smooth out the tracing carefully by rubbing from the center outward. After the tracing on the block is thoroughly dry it may be oiled, and the block finished by cutting through the tracing.

43. Cutting: The tool employed in cutting the block will give the print certain characteristic markings. The knife will give a sharp edged outline (Fig. 21 and Fig. 18) which is different in appearance from the line cut with a gouge (Fig. 22 and Fig. 23). To get acquainted with the cutting tool is the first step in the cutting process. Much disappointment and loss of nervous energy will be prevented if a few cuts are practiced on scrap material. All work should be cut slowly and carefully until experience has been gained. The design invariably suffers when lines are trimmed or trued up because of faulty or careless work in the first cutting. Lines cannot be cut clean and sharp if the cutting tool is dull. Any tool with a dull edge not only tears the material but is also difficult to control. The beginner who will keep his tools sharp and work slowly will soon find that his blocks need little "touching up."

The knife may be held in any manner most convenient to the individual. Some grasp the knife so that it is beneath the hand, others hold it much as one would hold a drawing pencil. This manner of holding the knife is especially good in making small cuts. The Japanese knife, used in cutting wood blocks, is held firmly in the right hand, the handle of the knife being in a vertical position. The fingers of the left hand pull the knife forward as pressure is being applied with the right. When using both hands, the block must be held against a strip of wood which has been fastened to the table. A bench block may be used. The block should be free in order that it may be turned as the cutting progresses. In cutting with a knife, the blade is drawn toward the operator and, as far as possible, away from the design.

To cut a linoleum block, the following order of procedure may be observed (Fig. 24). 1. Select an inner line and follow it as

closely as possible, holding the knife at an angle. This will give a broad base to the line. 2. Cut the second line in the same manner as the first and close enough to the first cut so that the two cuts intersect beneath the surface of the block. It will then be possible to lift out a V-shaped strip of linoleum. 3. Each printing line or surface is outlined in this manner. 4 and 5. The waste portion is separated from the printing surface either by a line or groove cut well into the block. 6. The waste or non-printing surface, if large, may be removed with a gouge. The larger the area to be removed, the deeper is the routed portion. It is often best to cut through the burlap and pull the waste portion off the block. 7. Fine detail is cut into the larger printing areas after the design has been outlined with the cutting tool. 8. The block is finished by beveling or trimming the outer edges.

The cross-section of a block properly cut with a knife is shown in Fig. 25. It has a sloping shoulder. Fig. 26 shows a cross-section of a block cut with a gouge. This tool produces a fillet and thereby gives a good base to the printing line or surface. To cut the walls down vertically, as in Fig. 27, will produce a block with a short printing life. The block which is undercut, shown in Fig. 28, is entirely unsatisfactory for printing. Such a block crumbles.

Gouge tools or gravers are held in the palm of the hand, a bit below the center, with the first finger nearest the cutting point. The gouge is pushed away from the operator. Curved lines are cut by turning the block with the left hand, and are as easily cut as straight lines. The angle at which the gouge is held is determined by the character of the lines and their direction. The deeper the tool is pushed into the material, the wider will be the line or trench left in the block. This line appears white in the print (Fig. 4, Plate II). The tool should never be forced to such a depth as to cause the edges of the line to tear. If the tool is kept sharp, lines of uniform depth and clean edges are easily produced. The dull gouge or graver will slip and tear the material, making it almost impossible to get uniform lines. In many respects, the gouge is the ideal tool for lino-

leum cutting. It is a natural and direct method of putting a design on the block. In free cutting (Fig. 8 and Fig. 41), the design can be executed quickly and with a distinct character of line.

Wood cuts, not the commercial wood engravings, are made with gravers. They are handled much in the manner of gouges. These tools were described in Chapter I. The block is held upon the sandbag with the left hand while the right hand guides the tool. Wood engraving, as it sometimes is called, requires careful treatment and a skill more exacting than that required in working with other materials. Work with fine detail is executed in boxwood or maple and end-grain blocks. In certain broad poster like work, side grain may be used. Wood carving tools may even find a place in this type of work. The appearance of the grain in the board may enhance the print if not too pronounced. Wood engraving will be found a fascinating though technical art.

Artcraft composition may be cut with either the knife or gouge. The texture of the material is such that it cuts with ease, making it an excellent block medium in the hands of the inexperienced carver or the skilled artist.

Parra blocks are best cut with a knife sharpened to a razor edge. The blade should be ground to a fine point. Take the handle of the knife firmly in the palm of the hand, resting the side of the hand on the block. Go around the entire design with the knife cutting to the ply. The parts which are not wanted on the plate may be removed with a pair of small pliers.

44. Proofing: After a block has been cut, a proof should be taken. The proof should be carefully checked with the original drawing. Ragged edges and thick lines should be corrected, and high points in the routed or non-printing areas should be removed. Any correction which will improve the print should be made at this time. Serious mistakes in cutting usually require a new block, although a skilled craftsman may glue a new piece of linoleum into place. Errors in wood blocks may be corrected by boring or cutting

away the spot and inserting a wooden plug. Obviously, the joint must be perfect and the surface smooth.

To take a proof, the block is inked with a brayer or printers' roller. The brayer is inked by using it to roll out or spread printers' ink into a thin film on a pane of glass or marble slab. A bit of ink, about the size of a pea, will suffice for a number of impressions of a block of ordinary size. A sheet of paper is laid upon the inked block, and an impression taken by the use of a proof planer and mallet. Proofs may also be taken by rubbing the paper with a burnisher, or a rubbing pad called a "baren." The proof-press, if available, or any of the presses listed in Chapter I may be used in "pulling" proofs.

45. Block Manipulation: Those interested in experimental forms of printing will find the linoleum block offering some possibilities. To produce different tones of color, go lightly over the surface of the linoleum with a sharp knife raising a nap. This raised portion will take more ink than the portion not scraped, which in turn will print darker.

In order to get a high-light effect, use a fine emery wheel (a small piece of well worn emery about 3/16 inch thick and 1 1/2 or 2 inches in diameter, or an emery pencil) and go over the portion of the linoleum that is to appear lighter in color. A decided gradation in high-lights may be had by this method. The surface of the material will remain firm, and the slight depression will be sufficient to give a variation in color. Fine sandpaper will not answer as it tears the surface of the linoleum and has a tendency to raise the nap. A little care in using the emery will give very interesting results in producing high-light effects in linoleum engraving.

A gradation in tone may be had when printing linoleum cuts on a cylinder press in the following manner. Thumb tack the linoleum on wood furniture which has been locked in the chase. Immediately beneath the linoleum insert two sheets of six ply card. Cut out the portions to print light in one of the cards. If the design is carefully

worked out so as to bring the tints next to whites or solid colors, no "breaks" will show.

Manipulation of the block's surface to produce unique prints has its limits. The most satisfactory and at the same time the most artistic method of producing prints is to develop a technique or style of designing and cutting which is distinctive and individual.

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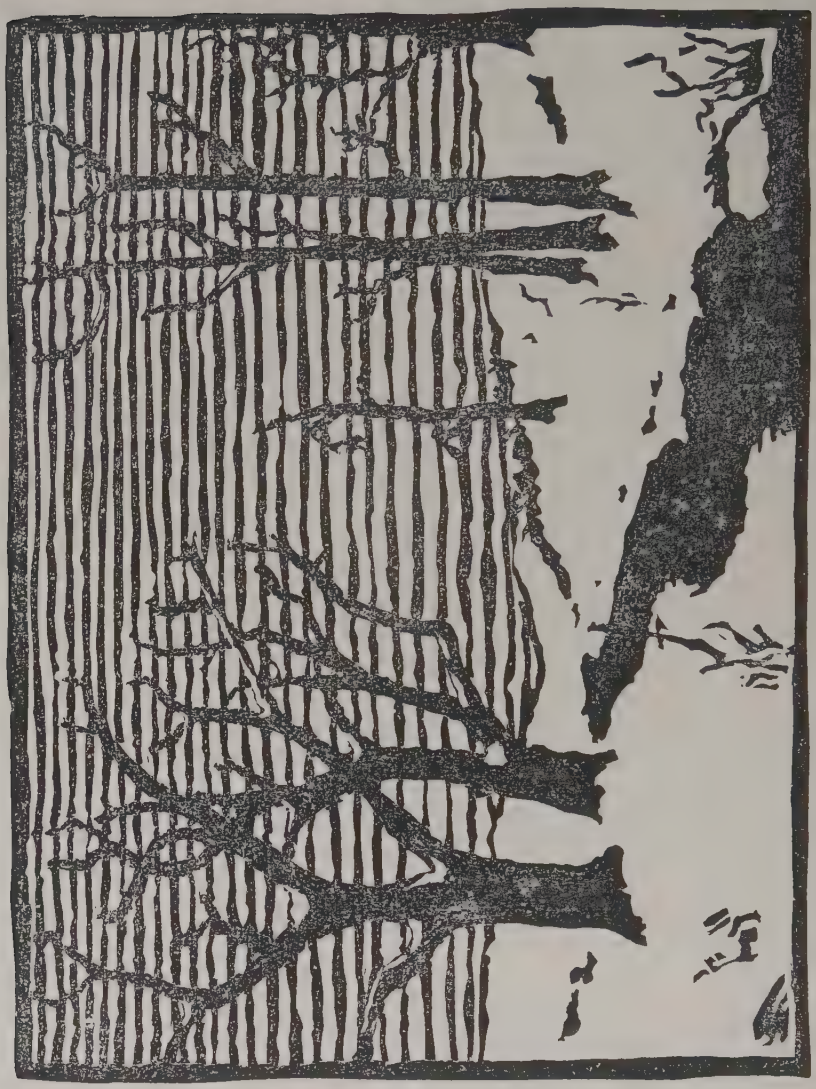


Fig. 21 F. H. Ernst

Linoleum

Fig. 22 O. A. Hankammer

Arteraft Composition

Fig. 23

Linoleum

J. Q. Steinbach

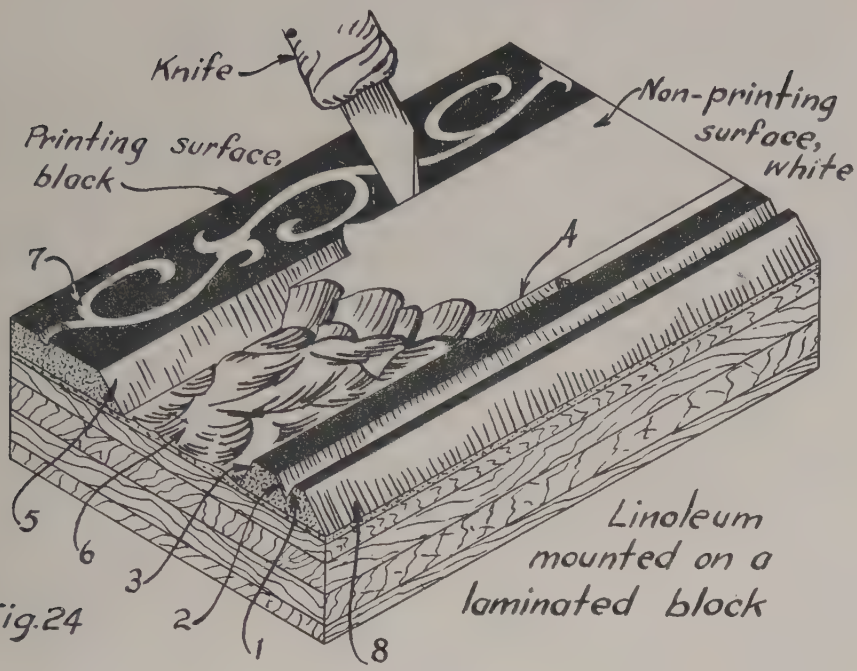


Fig.24

Fig. 25

Fig. 26

Fig. 27

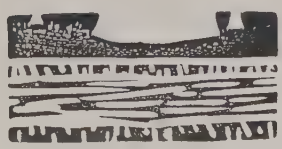
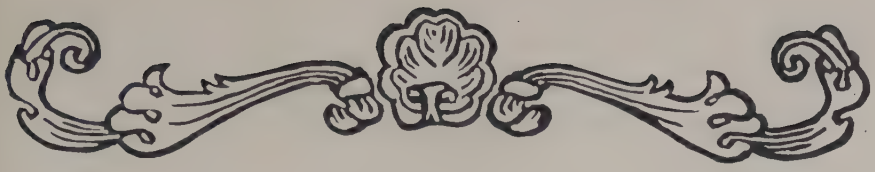


Fig. 28

CHAPTER FOUR



CHAPTER IV

Methods of Printing from Blocks

46. Simple Printing Methods: Various methods of obtaining prints from blocks are used. The process used is determined largely by the materials at hand. If no press is available, a letterpress or a clothes wringer may be used. These items were described in Chapter I. Prints may be secured from small blocks (Fig. 5 and Fig. 7) by using the block as a stamp in a manner similar to rubber stamps. Such blocks are known as stick prints. The originals of Figs. 11 to 15 were stamped in this manner.

47. Hand Printing: Those interested in making individual prints rather than producing prints in quantities may find the Japanese method most satisfactory. The process is essentially like taking a proof by hand. After inking the block, the sheet of paper to be printed is carefully placed in position against the guides or stops which have been provided on the block. The sheet is then covered with another sheet of thin paper and gently rubbed with the baren or rubbing pad. A few trials with this method of printing will teach one how much rubbing and pressure are necessary to produce a clear print.

The baren used by the Japanese is made by stretching a bamboo leaf over a four or five inch disk of cardboard. The ends are brought together to form a handle. Corn husks may be substituted for the bamboo leaf. A baren may be made by covering a coiled mat of raffia with a piece of vegetable parchment. All sorts of burnishers or rubbing pads have been used, including celluloid boxes, backs of combs, spoons, corrugated glass, etc.

48. Printing with Presses: The most satisfactory method of

printing from blocks is by the use of a press. Small wooden presses or etching presses may be used for limited editions. Regulation presses from the small hand lever press to the large cylinder press are the means of printing from blocks rapidly and uniformly.

To print with a press,* the type-high block is locked in a chase by surrounding it with wooden furniture and reglet, leaving just enough space for the insertion of quoins at the top and right-hand side. Tighten the quoins gradually after being sure that the block and furniture are perfectly flat. Just enough pressure is applied to hold the block firmly. This form is then placed securely in the press.

In printing from linoleum and similar materials, do not use any more impression than is absolutely necessary. The best results are obtained by using a hard tympan. The grippers should be securely fastened so they cannot strike the block. After inking the block, a trial proof may be taken. If no impression appears, the block is too low and needs to be built up. This is done by removing the form and pasting pieces of paper on the back of the block until the block is brought up to the correct height. If the block is too high, it must be planed off on the bottom. Another trial proof is then taken. Low spots are raised by sticking small patches of paper on the back of the block opposite the spots. The edges of the block may be preserved by building up the center of the back of the block slightly. The paper used in making ready should be roughly torn into shape. This method of make-ready is known as the underlay system.

First proofs may show the grain of the white paper in solid color areas. This is usually due to a lack of sufficient pressure or a lack of enough ink on the block. The ink may be too stiff to distribute properly. This may occur in cold weather. It is well to remember that temperature and humidity affect both inks and papers. Irregular impressions are remedied by careful make-ready.

*Text books on printing are listed in the bibliography.

Large blocks requiring much ink should be double-rolled before taking an impression.

49. The Printed Stock: Linoleum and blocks of similar materials produce prints which carry more ink than the ordinary printed form and therefore special care must be given such work to prevent offsetting. This may be done by slip-sheeting, that is, inserting blank sheets of paper between the printed sheets. Prints which are likely to offset should not be stacked in large piles.

50. Water Color Printing: Much of the recent development in color printing has been done with water colors. An assortment of colors ground in water soluble base is obtainable from ink manufacturers. These inks are used with the standard printing presses—cylinder and platen—and in some instances rubber plates and rollers are used. Water color inks may also be used when printing from metal plates and hard composition rollers. Very good results have been achieved with them.

Rollers, ink plates and cuts should be thoroughly cleaned of all greasy substance, otherwise these inks will not distribute properly. A reducer similar to glycerine is used, manipulation of the consistency to suit the different kinds of paper stock. Otherwise these inks are handled in the same manner as ordinary varnish base printing inks. No particular skill is required to achieve good results.

Printing with water colors enables one to produce decidedly soft effects, the colors blending well. In using these colors in block printing, it will be found that artcraft composition, parazin and parra, make the best plates. These materials have no equal for tint blocks.

CHAPTER FIVE

CHAPTER V

Color and Its Application to Block Printing

51. Color with One Block: After cutting and printing a few blocks, the possibility of printing the same block in different colors will suggest itself. It is a fascinating experiment to try out a block in various colors. The idea of using several colors will suggest the necessity of several blocks. However fine color prints may be produced from a single block. Such work is much like the etcher's craft in that each print is a highly individual matter. Quantity is not sought; quality alone is the end to be achieved.

To produce color prints from a single block, the block is designed so that the various portions are separated with a white line as in Fig. 4, Plate II. The white lines in the block are analogous to the lead in an art glass window. Each portion of the block is then painted in by hand with the desired color and the impression taken in a manner previously described. The colors may be blended or kept flat as in poster work. Water colors may be used in this method of printing. Before applying water color, the block should be thoroughly dampened. Inks may be applied with flat brushes the same as one would apply oils.

Due to the inherent limitations of the process of color printing with one block, designs must be quite conventional or of a decorative nature. Prints will show a much greater variation in color distribution than those printed on a press. For a limited edition, this may be desirable. Each print may be numbered and signed by the designer.

Certain so called color block prints are made by printing a key block and then filling in the print with colors by hand. This method

is often resorted to in printing a limited edition of Christmas cards and items of a similar nature. Water colors, tempera, and bronzes are used in this class of work.

52. Color with Two Blocks: A design to be printed with two colors must be prepared so as to make a clear color separation. The key block, or the block containing the principal outlines, is prepared as has been described in a previous chapter. This block is often printed in a dark color and over the other color. When printed over lighter colors, slight irregularities of line or overlapping of colors are covered. To prepare the color block, a careful transfer of the design is made upon a block the same size as the key. A better method is to take a heavily inked proof of the key block and place this proof ink side down on the new block. By rubbing the back of the proof, an exact print or offset is produced upon the face of the new block. This design is then cut so as to leave the proper printing areas. If these areas are wanted in several colors, the same procedure is followed as in printing in colors from one block. The key block may be printed in a press while the colors must be hand printed. These prints will also show a certain amount of irregularity.

53. Blocks for Multi-color Work: When a number of colors are wanted in the design, a careful offset of the key block is made on each color block that is wanted. This is easily done on a press by taking a good inky impression of the key block on the tympan. A clean block is now substituted for the key block and upon closing the press, the impression on the tympan will be transferred to the new block.

The simplest and best method of making transfers from the key plate to other blocks may be done in this manner: Take a proof of the key block on a proof press or a platen press, using glassine paper (a hard, transparent paper upon which the ink will not dry for many hours), and place this proof ink side down on a block the same size as the key block. Rub lightly with the fingers and the

transfer has been made. Absolute register may be obtained by this method. For each color wanted a separate block must be had.

These blocks bearing the offset are cut with considerable care as they must register, that is, the edges must match. If the colors fit properly in their respective areas, the work is said to "register." A close register is desirable, but the printer who expects a hair-line register of linoleum blocks is certain to be disappointed. The slight irregularities normal to linoleum blocks are a part of their charm. By cutting just outside of the line, the color block will lap enough to avoid the white lines which become so noticeable when a block is cut a bit too small.

When transferring areas limited to one color rather than transferring the entire design, as is done by offsetting, careful register marks must be cut. These should be laid out with the steel square and be carried on each block in exactly the same position as on the key block. Too much care cannot be given the matter of good register when working with color blocks.

Portions of the tint block may be removed (Fig. 29) and, in general, the tint block may be treated like a key block. A third color may be produced by overlapping two colors. For example: a blue printed over a yellow will give a green. Thus we have the three colors: yellow, blue, and green from two impressions, that of the yellow and the blue block. With careful planning of the design and proper inks, splendid multi-color work can be done without an excessive number of blocks.

Transparent inks, such as process inks, will give a wide range of colors when properly overlapped. As has been stated, this requires careful designing and accurate cutting of the block. Process inks are usually printed in the following order: yellow, red, black, and blue. The order however should be determined by the job in hand. To alter the color arrangement using the same set of blocks will produce a great variety of prints. The change may be so marked at times as to create the illusion of having used new blocks. The possibilities in this work rest entirely with the experimenter.

54. Colored Stock: A careful selection of paper should be made when planning block prints as much of the character of the print is due to the paper used—"paper is a part of the picture." Many fine colored papers, especially in cover stock, may be had. By selecting colored stock, a more striking print may often be produced than if the blocks were printed on white. Japanese and other printing papers were discussed in Chapter I.

55. Ink Mixing: Those not having had any experience in mixing inks may find the following suggestions helpful. The first requisite to good color results is clean materials and good materials. The glass slab, spatulas and cleaning materials should be at hand. The inks should be of a good quality and limited to the products of one manufacturer. Tube inks are more economical for the average printer of blocks. If the tube is difficult to open, hold the screw top in a flame for a moment and it may be readily unscrewed. In using tube ink, squeeze from the bottom, rolling up the collapsible tube as it is emptied.

In mixing, always add the darker colors to the lighter. Use the white or lighter colors as a base. If a large quantity of white is to be used, mix transparent white and mixing white about half and half. To mix white with a color gives a tint. (Tints in water colors are made by thinning with water.) To darken a color, add black to the base. This gives a shade. Colored inks may be darkened by adding a bit of dark bronze blue. Such a mixture retains the brilliancy which would be deadened by the addition of black. In mixing colors do not use more than three colors as the resulting mixture will probably appear to be dirty. Black and white are not considered colors here.

Printing one color over another gives results similar to the mixture of both colors in equal amounts:

Red over yellow gives orange
Blue over red gives purple
Red over green gives brown
Red over orange gives light red

Blue over green gives bottle green
Blue over yellow gives green
Yellow over purple gives dull green
Yellow over brown gives gold brown
Violet over orange gives russet
Violet over green gives olive
Green over orange gives citron

White mixed with pure colors:

White and black make neutral grey
White and crimson make rose pink
White and green make apple green
White and orange make apricot
White and scarlet make salmon pink
White and ultramarine make sky blue
White and violet make heliotrope
White and yellow make straw

White mixed with shades:

White and brown make buff
White and claret make purple grey
White and maroon make red grey
White and myrtle make green grey
White and navy make butcher blue
White and olive make khaki
White and plum make lavender grey

Some useful color mixtures:

Green and a bit of magenta make myrtle
Magenta and a bit of green make claret
Orange and a bit of ultramarine make terra cotta
Red and a bit of turquoise blue make maroon
Turquoise and a bit of red make peacock blue
Ultramarine and a bit of orange make navy blue
Violet and a bit of yellow make plum
Yellow and a bit of violet make olive

The above lists will offer many suggestions to the color experimenter and aid him in arriving at definite color combinations with a minimum amount of experimenting. It will also open the way to producing other interesting combinations.

56. Color: In order to do color work with confidence it is necessary to know a few basic principles pertaining to color and color harmonies. An extended study of color may be made by referring to books listed in the bibliography. Particular attention is directed to the Munsell theory of color and color notation. It is a scientific and workable theory.

If a ray of sunlight is passed through a prism it is broken up into a band of colors called a spectrum. These colors are spoken of as normal colors. The colors of a light ray must not be confused with the colors produced by pigments. Pigments are coloring materials and naturally do not have the qualities of colors found in the spectrum. Since printing is usually done with pigments in the form of printers' inks, the discussion will be limited to this field.

It will be found that three colors, red (R), yellow (Y), and blue (B), cannot be made by the mixing of any colors. These three colors are therefore known as primaries. The Munsell system teaches that red, green, and violet-blue are true primaries. Using red, yellow, and blue as primaries, to mix any two of these primaries will produce a new color known as a secondary color. Thus, by mixing red and yellow we get orange. Red and blue mixed together give violet. Blue and yellow produce green. The secondaries therefore are: orange (O), violet (V), and green (G). Should the three primary colors, or the three secondary colors, be mixed in proper proportions, they would produce a neutral grey.

Black, white, and especially grey, are considered neutrals. Black is the result of a surface absorbing all color, while white is the result of a surface reflecting all color. Grey is due to the sediment or body of pigments and results when colors are mixed in certain proportions.

Colors have three qualities or "dimensions." They are: hue, or the name of a color; value, or the degree of lightness or darkness of a color; chroma, or the strength, intensity, of a color.

The changing of a hue is done by adding another color to a given one. For example, some yellow added to blue will change its

hue to green. Values are changed by adding white to lighten and black to darken a color. Tints range from middle value to just below white. Shades range from middle value to just above black. The chroma or intensity of a color may be changed by greying the color through the admixture of its complement, or grey.

If the colors are arranged in a circle as in Fig. 30, yellow being at the top, in the center, and violet directly opposite on the same vertical line, the colors will fall into two large groups. Those in the left half will range from yellow through red to violet. Those in the right half will range from yellow through blue to violet. The left group contains the warmest and most conspicuous of the colors. They are also said to be advancing colors. The lower range of the right hand group contains the coldest and less conspicuous of the colors. These colors are said to recede. The warm colors in the lighter range suggest cheer, aggressiveness, and excitement. In the darker range, they suggest vitality, richness, and quality. The cold colors in the lighter range suggest restfulness, fragility, and expanse. In the darker range, they suggest weight, reserve, and depression.

Color schemes to be effective must be interesting and appropriate. Schemes may be harmonious as far as the color combinations are concerned and yet not be effective. Good color work is not produced by casually reading about color, but by study and a careful application of pleasing combinations to each color job.

There are two recognized groups of color harmonies, namely, related colors and contrasting colors. To aid in determining color harmonies, a shield for the color wheel should be cut (Fig. 31). Openings are made in the positions indicated, and the colors appearing as the disk is rotated about a common center will give the combinations of the various groups.

In the related harmony group, the monochromatic or one color harmony is the simplest to produce. It consists of but one color with varying values and intensities. The other related harmony is called "analogous." This type of color harmony is produced by using the colors that lie next each other on the color wheel. It is

best to select only colors that are found between the primaries. To cross a primary color and produce a successful combination requires the skill of a genius.

Harmonies of contrasting colors will be found more interesting than related color, but also more difficult to handle. The larger areas of color should be quiet in effect. The smaller the area, the more striking may the contrast in color be. Contrasting harmonies may be divided into four groups, triads, complementary harmony, split complementary harmony, and double complementary harmony.

Triads form equilateral triangles on the color wheel (Fig. 30 and Fig. 31). Such harmonies are rich, but difficult to handle. It may be helpful in working with such combinations to make the largest area almost grey; the next color must be partially neutralized, and the third color kept small in area though bright.

Complementary harmonies are produced by selecting colors which are directly opposite each other on the color wheel (Fig. 30). Double complements are formed by selecting two adjacent colors and their complements. Split complements are combinations of a color with the colors on either side of its complement (Fig. 31). In all of these harmonies, care and judgment must be exercised, as the wheel indicates but the hue. Adjustments in value and chroma must be made in any combination. A comprehension of the "dimensions" of colors will show a vast range of useful color combinations now rarely found in printed work. New and harmonious color combinations may lift a mediocre design out of the realm of the commonplace.

Linoleum Fig. 29 F. H. Ernst

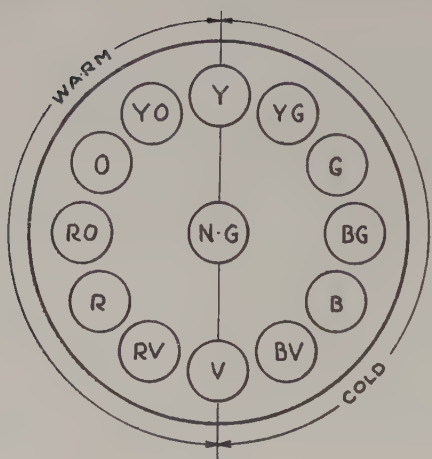

WARM
Y
YO
YG
O
G
RO
N·G
BG
R
B
RV
V
BV
COLD

Fig. 30

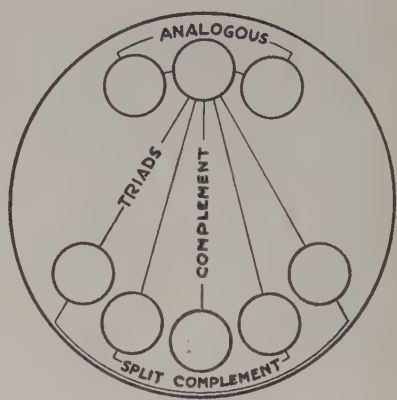

ANALOGOUS
TRIADS
COMPLEMENT
SPLIT COMPLEMENT

Fig. 31

Linoleum

Dorothy Valentine

CHAPTER SIX

CHAPTER VI

Block Printing in the School

57. Expression and Correlation Through Block Prints: Block prints afford an opportunity to give graphical and forceful expression to ideas. Imagination may have free reign yet it must be held to the severe limitations of the medium. It is this very fact, with the necessity for economy of line, which makes linoleum blocks so valuable in design work. The student must think in terms of mass rather than line. To be capable of selecting pleasing proportions and properly balancing masses regardless of their size or color is no mean accomplishment. This ability will be demonstrated in the well designed block.

In realizing the possibility of multiplying his design with ease and speed, the work may be hurried or done without the careful thought necessary to a good piece of work. As the student sees the design grow under his hand, his enthusiasm will grow. Many students find that much of the pleasure in block designing comes in the printing. Students should be encouraged to make their own prints, especially when the blocks are hand printed. In schools having printing departments, the printing may be done by students of that department. Such relationships between the art department and the print shop make for a better understanding of the work and the requirements of each. This element of cooperation may be developed throughout the school. If they but will, teachers of literature, geography, physiology, or any of the common subjects may so relate their work that all school subjects are a properly integrating mass rather than segregated slices of unrelated knowledge. Such an attitude toward all school work will instill friendly cooperation and

an appreciation of community effort toward furthering a worthy project.

58. Practical Uses of Block Printing: Block printing may be applied to many problems in a very practical manner. In the art department, block printing may be a means of teaching design and color. To have the student interpret a halftone print or a painting in terms of black and white through the block will give an insight into the principles upon which works of art are built. Composition, light and dark, balance, and other factors employed in art structures will become apparent. Printing blocks in color will call for some study and experimentation in this interesting field. Out of the activities of designing, cutting, printing, and studying block prints will come an appreciation which cannot be acquired in any other way.

In the home economics and art departments, hand blocking of fabrics opens the way to the decorating of many useful projects such as curtains, scarfs, pillows, dress materials, and other fabrics. Small simple patterns, when properly designed, will make pleasing borders (Fig. 33) or surface patterns (Fig. 34) by merely repeating the unit according to some definite scheme. Plate V shows the evolution of the design used in making the patterns for Fig. 33 and Fig. 34.

In general, the best fabrics for block printing are those without dressing having an open weave. Linen, crash, burlap, muslin, cheese cloth, etc., will be found suitable. Fabrics with too coarse a weave are difficult to print. Excessive pressure must be applied to such materials.

Fabrics to be printed should be stretched smoothly over a thin layer of paper. After thumb-tacking the fabric in place, lay out very faintly the general structural lines of the pattern with charcoal or chalk. These lines serve as guide lines in placing the block when printing the pattern. The printing is done by holding the block firmly by the finger tips, and pressing it down on the color pad so as to coat the printing face of the block. The color may also be

applied to the block with a camel's hair brush. After "inking" the block, it is carefully placed in position, following the guide lines, and firmly pressed down on the fabric. Each impression must be followed by a fresh inking. This process is repeated until the pattern is completed.

A color pad may be made by tacking about a dozen thicknesses of cheese cloth or muslin to a small board or block. The pad should be a little larger than the printing block. The pad may be charged by brushing or sponging on almost any kind of pigment. Tube colors thinned with turpentine or printing inks give good results. The pad should be given just enough color to coat the printing block freely but not excessively. Actual trial in printing will best determine the proper condition of the pad. This should be done on a scrap piece of cloth. Surplus color may be removed by stamping the pad on heavy cloth.

Schools are constantly in need of certain printed matter. Such things as posters (Fig. 32), announcements, and illustrations for school papers are examples. These may be designed by the art department and be printed in the school print shop. The school printing a newspaper, magazine, or year-book cannot afford to overlook the possibilities of block prints. Headings, comics, and cartoons will enliven the school paper. The school magazine can use covers and illustrations "done in linoleum." Decorative designs, division pages, and borders will add to the beauty and artistic merit of the school year-book. Such publications are of interest to the school and community, and will be considerably enriched through the use of linoleum and artcraft composition blocks. These "cuts" will print in any school press. They will last for several editions of a school paper. If cut in artcraft composition, parra, or wood, the length of life of a "cut" is indefinite. Special editions (Plate VI) may be printed in colors. These blocks need not be in large flat masses but may be cut in line effect, especially if used as a background. Hand engraved blocks eliminate engravers' bills, and give the school publication an individuality and color which cannot be

obtained in any other way. Before cutting blocks for a school paper, it is best to consult the supervisor of printing in regard to size, colors to be used, and whether the linoleum is to be mounted or unmounted.

59. Block Printing Projects: In addition to the suggestions already given, the following list may supply ideas for subjects having worth as school problems:

Cover and end papers
Party invitations
Illuminated mottoes
Menus
Illustrations
Calendars
Monograms
Announcements
Place cards
Programs
Bookplates
Initials
Hand books

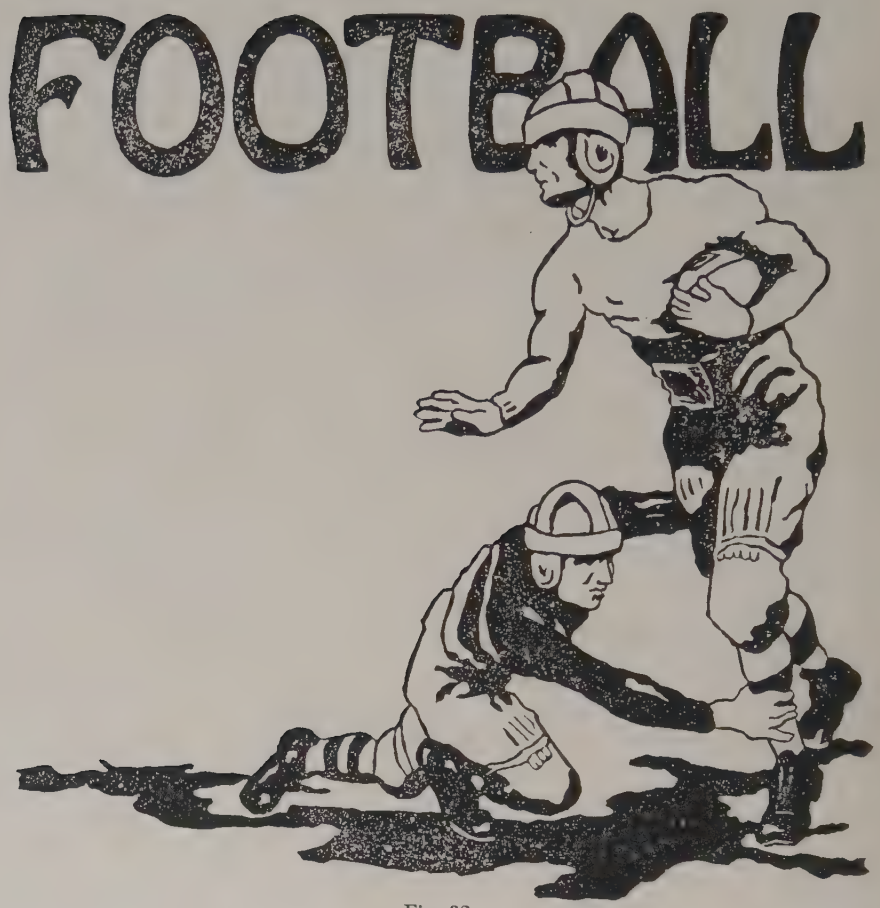
School posters:
- Athletics
- Art exhibits
- Books
- Music
- Dramatics
- Health
- Safety
- Kindness to animals
- Patriotic
- Holidays
- Sales and bazaars
- Departmental displays, etc.

Greeting cards:
- Christmas
- Easter
- Birthday
- Mother's Day
- Valentines, etc.

60. Themes and Reports: Teachers wishing to require themes or reports on certain phases of block printing may find the following topics suggestive. These or similar topics might be assigned to members in the class requiring that the material be presented in the form of a report.

1. History of Block Printing.
2. American Block Print Artists and Their Work.
3. Foreign Block Print Artists and Their Work.
4. Special Methods in Block Printing.

5. Unique Uses of Block Prints.
6. Commercial Aspects of Block Printing.
7. Block Print Materials, Common and Uncommon.
8. School Equipment and Supplies for Work in Block Printing.
9. Correlation of Printing and Art Work.
10. Dressing Up School Publications with Block Prints.
11. Block Printing as a Mode of Artistic Expression for Gifted Children.
12. Motivating School Work Through the Use of Block Printing.



(Reduced)

Fig. 32

Linoleum

F. Ernst

(Reduced)

Fig. 33

Linoleum

Linoleum

Fig. 34

(Reduced)

Plate V

(Exact Size)

Maye Hoover

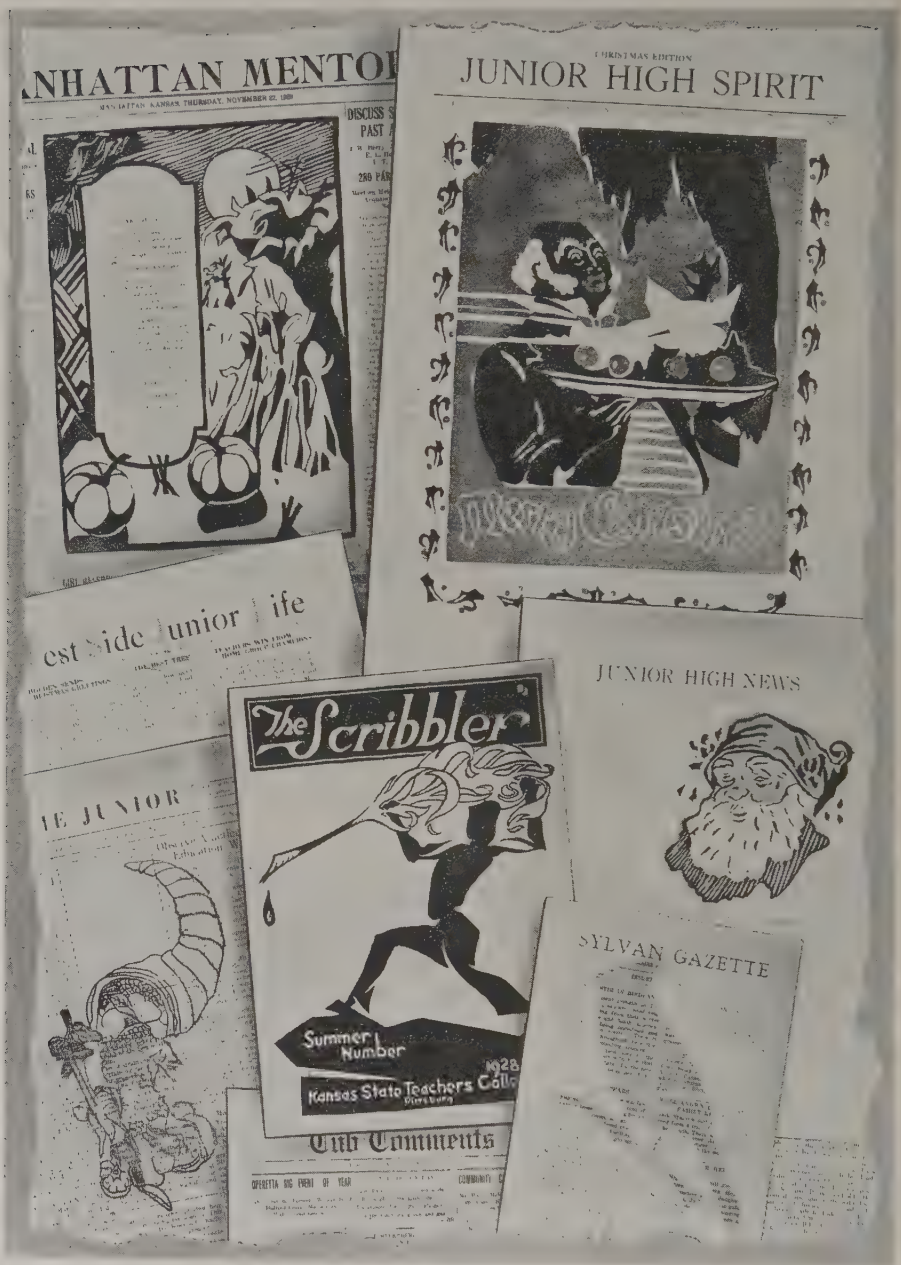

NHATTAN MENTOR
CHRISTMAS EDITION
JUNIOR HIGH SPIRIT
JUNIOR HIGH NEWS
The Scribbler
Summer Number
Kansas State Teachers Colle
SYLVAN GAZETTE
Club Comments

Plate VI

Linoleum C. H. Waller

The block was lacquered, filling the grain of the linoleum

CHAPTER SEVEN

CHAPTER VII

Commercial Possibilities in Block Printing

61. Commercial Block Printing: Block printing as a means of giving expression to the creative impulse has been discussed in previous chapters. The making of prints is not only worth while as an art, but there is also a commercial value which is rapidly being recognized. Printing plants, both large and small, will find many occasions to use blocks cut from linoleum, parra, or artcraft composition. Such blocks will quickly and easily supply required accessories, tint blocks, special ornaments, etc., which are not in the shop's stock. A careful workman can make a satisfactory block upon short notice. This is particularly true when tints are to be cut for printing plates. On small runs, there is no need of having a "zinc" made of simple designs or tints when a scrap of linoleum is at hand. The linoleum need not be mounted but may be thumbtacked to furniture locked in the chase.

The greatest field for linoleum and composition blocks probably is in the small edition jobs. In such work, the job may be printed directly from the block. Linoleum blocks will give from 5000 to 8000 good impressions under proper conditions. Artcraft composition and parra blocks will give more than double the impressions of linoleum, and will do the job more smoothly with less ink.

Blocks should be electrotyped if long runs are to be made. The original blocks may then be preserved and the run be made with the "electros." Another method of preserving the block and providing a printing plate is to have a zinc etching or "cut" made from

a good clean press-proof of the block. These methods are resorted to only when special illustrations or designs have been prepared for large edition work such as magazines, books, broadsides, and similar matter.

62. Tint Blocks: Tints seem to print smoother on a flat-bed cylinder press than on a platten press. Artcraft composition or parra should be used for tint blocks as these materials have a smooth surface and are inked more readily than linoleum. Also, these materials, because of their resiliency, will print on all kinds of paper and cardboard, oil-cloth, leather, glass, celluloid, sheet metal, wood, and fabrics.

Obviously, tint blocks for backgrounds or as a second color may be run with a zinc key plate. Type-cuts (Fig. 35), illustrations, etc., may be given a tint block by offsetting the design on a blank block and cutting away the non-printing portions. Tints for special shapes, such as hearts, diamonds, stripes, triangles, or any geometrical shape, may be cut quickly and easily. On one occasion, a shop ran short of gummed paper of a certain color. Time did not permit ordering more stock. A tint block was sawed to size, and in a short time enough stock was tinted to finish the job.

Road maps of local areas may be printed in color from blocks cut in linoleum. Detours, hotels, towns or advertised plots may be indicated on standard maps by a tint. Such blocks may be made by tracing the portion of the map wanted and then transferring it to a blank block. Printing tints on graphs (Fig. 36) is similar to map work.

63. Special Blocks: Special ornaments, such as head and tail pieces (Fig. 37), decorators, and "fillers" may be cut. They help to give unity to a job when kept in the same general style. The chapter headings and division pages in this book are examples of this type of material. Initials, either plain or decorative (Fig. 38 and Fig. 39), may be prepared and used to good advantage in booklets, folders and other forms of commercial printing. Work of this nature should be designed to harmonize with the printed matter.

Closely related to initials are monograms (Fig. 40). They may often be used in commercial stationery and labels.

Besides the suggestions already offered in this and previous chapters, there are many other pieces of printing which may be enhanced or be done with designs cut into artcraft composition and similar materials (Fig. 41 and Fig. 42). The field of advertising offers many possibilities in such forms as window cards, posters, counter cards, sale tags, desk and wall calendars, blotters, street car cards and novelties. Covers, book jackets, house organs, pictorial inserts, even catalogs—all can use the block design to good advantage.

The shop without accessories, especially in the larger sizes, such as punctuation marks, arrows, hands, dollars, cents and per cent signs may easily have a good stock at the price of a little patience and some linoleum or other block material.

May we urge, in conclusion, that the design be given serious thought. Failure in design cannot be remedied by good cutting or good printing. It will always remain bad, if badly designed. The design then is of primary importance. If color is used, choose harmonious combinations. They may be striking and at the same time be harmonious. The print should always be given the proper impression—just enough to give a good print. These three: design, color, and impression, and the most important of these is design.

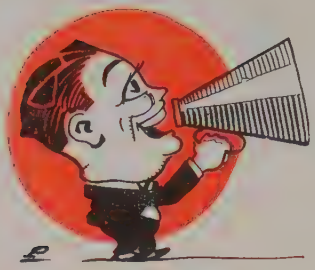


Fig. 35

Tint

Four Tint Suggestions for Fig. 35

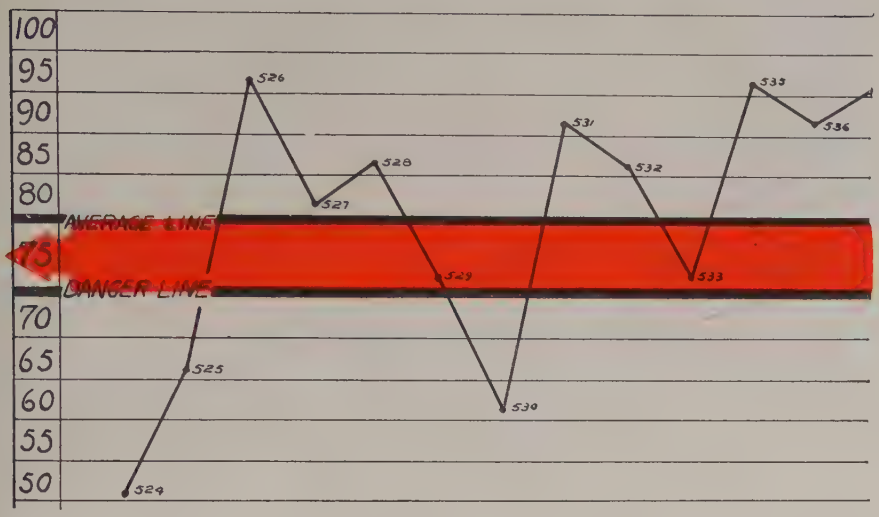
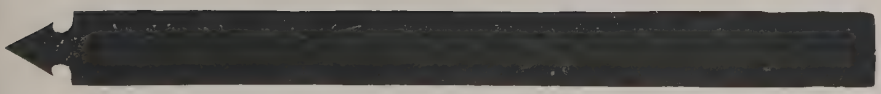


Fig. 36



(Tint block)

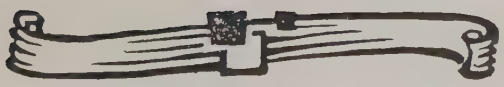


Fig. 37

Artcraft Composition

O. A. Hankammer

Fig. 38

Artcraft Composition O. A. Hankammer

Fig. 39

Artcraft Composition O. A. Hankammer

Fig. 40
Artcraft Composition O. A. Hankammer

Fig. 41

Artcraft Composition

O. A. Hankammer

Fig. 42

Artcraft Composition — O. A. Hankammer

F. C. Lampe

POSTER PRINTING

Commercial printers are paying more attention to poster work now than ever before, especially since water color printing has met with success.

There is a constantly increasing demand for color printing. No material employed in color printing lends itself better for a high grade job than artcraft composition, whether the printing is done with pigment or with water color inks.

When the illustration has been decided upon, the hand tooling of artcraft composition is easily done. Arranging the color scheme and preparing the blocks for color is a simple process.

Progressive printers find a ready market for posters. Those who have not yet gone into this line are losing opportunities. Their business may be materially increased if they look into the possibilities that this kind of printing offers.

It may be well to call particular attention to advertising plates 42A and the pages that follow. Artcraft composition was used for the posters of which these have been copied. The size of the original posters was in most cases 14x22 inches. The color scheme has been changed for convenience.

Fig. 42A

An example of commercial work done in artcraft composition. The size of the original cut was 9½x11 inches. Excellent treatment in black and white printing. Such effect can not be obtained with linoleum.

Fig. 42B
Cut in Artcraft Composition. Printed in three colors and black. Taken from a poster 13½ x 21 inches.

Fig. 42C
Cut in Artcraft Composition.

Fig. 42D
Cut in Artcraft Composition. The poster it was taken from was 14 x 22 inches. Four impressions.

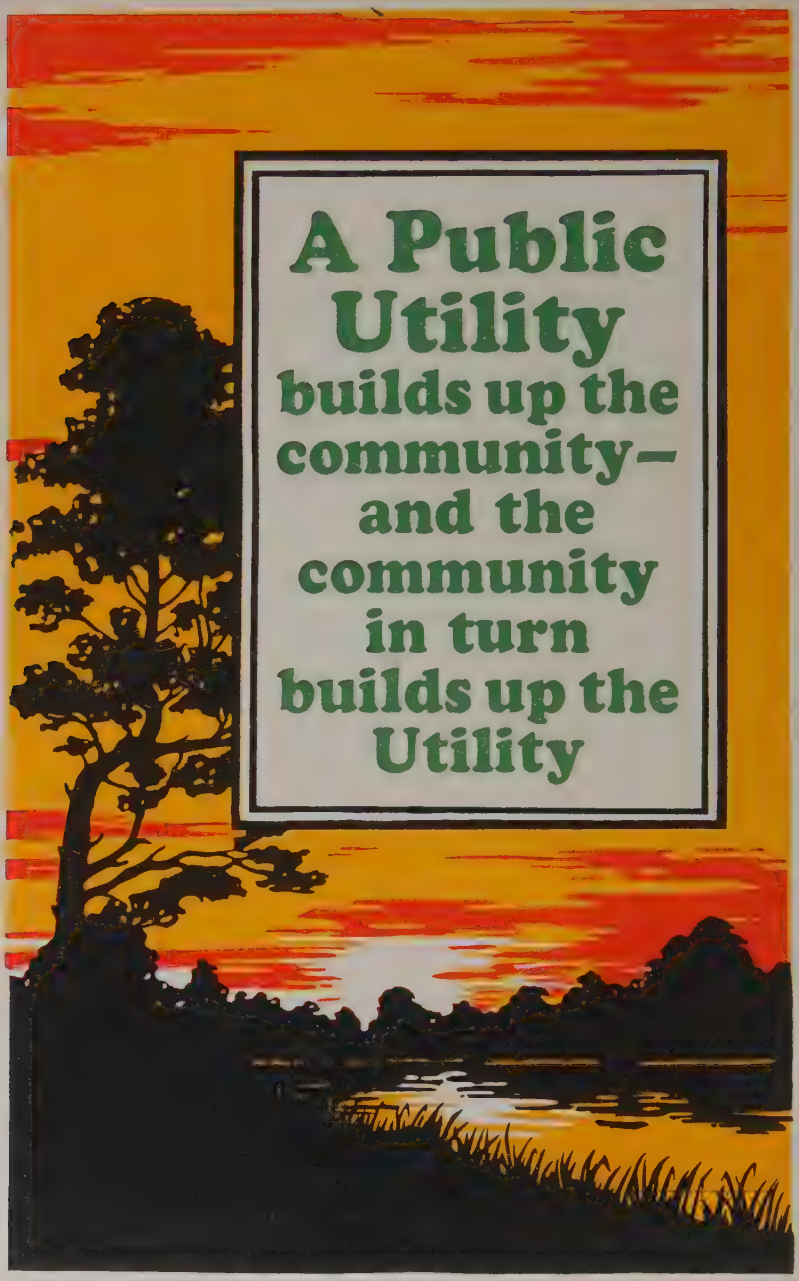


Fig. 42E
Cut in Artcraft Composition. Three impressions. From poster 14 x 22 inches.

Fig. 42F
Showing the key plate for color arrangement, indicated by fine lines.

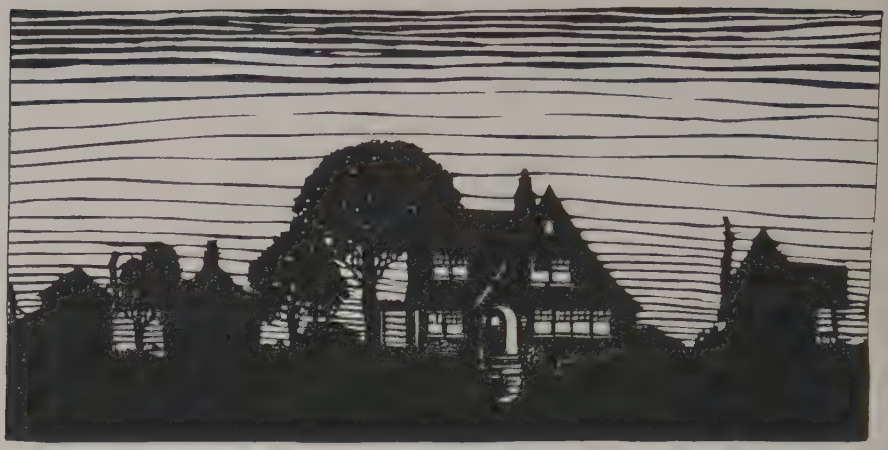


Fig. 42G

This picture may be shown in colors—blue for the sky, black key plate, chrome yellow for light in the windows. Artcraft Composition.

Charles Miller

HELPFUL SUGGESTIONS

Facts About Materials, Tools, Equipment

Care should be taken in selecting the equipment for block cutting. In this book mention is made of every known material employed in hand tooling. Illustrations are shown printed direct from the blocks cut in the materials. It should not be difficult to make a selection of the one wanted after a careful study of them. Much depends, of course, upon the purpose they are to serve. Choosing hand cutting tools is as important as securing the materials. Briefly stated, here are the main facts, referred to in Chapter Two:

Boxwood—This is the best for fine engraving. It is more expensive than other woods, costing as much as 15 cents per square inch. Good boxwood has practically no grain. Its printing surface is smooth. Electrotypes can be made of the cuts. The blocks can be sensitized and photographed upon. Sharp tools cut a clean line, and the finest lines will show in the print. Engraver's tools are used for cutting.

Endgrain Maple—The wood is somewhat soft and spongy. It is not as easily cut and does not permit of the delicate treatment obtained with boxwood. With care and skill endgrain maple blocks will answer many purposes of the engraver. Engraver's tools are used for cutting.

Sidewood—This is soft wood, which often has a decided grain. If the grain is too pronounced, it will show in the print. It is easily cut. Transferring to the block, placing the picture in reverse, may be done from the pencil sketch by rubbing the back of the sketch with a smooth piece of wood. Wood carving tools are used for cutting.

Artcraft Composition—Its surface is smooth and is engraved with practically no effort. It takes ink readily and spreads it evenly upon the paper. Less ink is required than with zinc plates or halftones, whether paper or fabric is used to print upon. It is a

trifle more expensive than linoleum. From it electros can be made. Will permit of many thousands of prints without injury to the material. It may be bought unmounted or upon type-high wood blocks of uniform size. For pigment or water color inks it is ideal, and for tint blocks artcraft has no equal. Linoleum tools or a sharp knife will cut it. V-shaped artcraft tools are the best for fine work.

Battleship Linoleum—Glued on wood blocks, type high. Its surface is not smooth, as is the case with the other materials. Some prefer linoleum because it gives a sort of spotted effect on the printed sheet. It is not difficult to cut, but the tools dull rapidly when using it. Because of its texture it is not suited for tint blocks, and it does not answer very well for silhouettes. The material is too soft for long press runs, and not as good as others for fine line engraving. It is used quite extensively in schools by beginners in the art of hand tooling, mainly because it is cheap. Linoleum tools are used, both V and U shaped, for cutting it.

Parazin—Cutting surface is smooth. To engrave it is not difficult. Good material for tint blocks, if they can be obtained in the right size. Used for both oil and water color inks. The top, or cutting surface, is vulcanized to the base, which is claimed to prevent shrinkage or warping. The greatest difficulty with parazin is in the sawing of the large plates into blocks of suitable sizes. It cannot be done with an ordinary saw. A carborundum wheel has been used, but often the disc breaks and there is danger in the flying pieces causing injury. A wide band saw has proved more satisfactory.

Parra—Its base is of a rubber substance. It can be cut only with a sharp knife, ground to a very fine point. The best knife for the purpose is made of a hack-saw blade. Parra cannot be cut with push tools. Much skill is required to cut it. Makes good tint blocks. Its surface is smooth and takes oil or water colors readily. Costs more than many of the other materials mentioned. Used quite extensively in commercial printing. Mounted upon wood blocks, type high. Too difficult for beginners to use.

Linoleum Tools—There are many tools on the market for cutting linoleum, some V and others U-shaped. As the shape would indicate, for fine line work the V-shape or the improved No. 20 tool will cut the finest lines. The V No. 21 cuts a line 1/90-inch in fineness. The No. 22 is 1/64 inch and the No. 23 is 1/32 inch. These tools are known as the Lampe tools, made of the highest grade tooled steel. See the illustrations under the heading "Plates" engraved by Mr. Steinbach, who used tool No. 20. The V-shaped tools are no more expensive than others, but they are better.

Engraving Tools—Used for boxwood, endgrain maple and other hard woods. Tint tools, spitsticks and gravers are the names. They are made in sizes for cutting lines of different widths.

Carving Tools—Henckel's wood carving tools are made of the finest steel. They give satisfaction. Thirteen sizes make up the complete set.

Magnifier—For very fine work a magnifying glass should be procured, especially if the eyesight is defective. A large lens, permitting the use of both eyes, is the best. Bausch & Lomb manufacture good glasses. The one with adjustable attachment, and the electric bulb, is preferred to small glasses. A shade protects the eyes from glare and the light is thrown directly upon the work.

Hand Printing Press—The "Ideal" or the "Pilot" answer all purposes for block printing where limited number of impressions are wanted. They are substantially built, and with them satisfactory work may be done. The sizes of chase measurements are: "Ideal"—No. 2, 3x5 inches; No. 3, 4x6; No. 4, 5x7½; No. 5, 6x9. "Pilot"—6½x10 inches.

PLATES

Linoleum O. A. Hankammer
Four impressions, with five-color effect

Linoleum F. C. Lampe

(See Art. 45, Page 61)

Showing variation in color, obtained by the use of a small emery disc. Sandpaper or a knife will raise the nap, which will take more ink and print darker. Emery keeps the linoleum firm, and high lights may be worked in an otherwise one-tone picture.

Linoleum — Margaret R. Schauffler

Excellent in design and showing skill in cutting. Color arrangement for this picture should be an easy problem.

Artcraft Composition

Linoleum

F. C. Lampe

Difference in texture of materials is plainly seen in these cuts

Taken from an embossed piece of paper found in a jewelry case fourteen years ago. The paper, inked with a hand roller, was printed upon the block with a proof press, a rather novel experiment. The center is the only change made in the design. In hand-tooling this cut Mr. Steinbach shows remarkable skill.

Drawing by May Lampe Cut by J. Q. Steinbach
Artcraft Composition

Best material for illustrations printed in black and white

Artcraft Composition

Drawn with pen and ink on the block by May Lampe. The engraving is by J. Q. Steinbach. Printed direct from the block.

Artcraft Composition

Pen and ink drawing on the block by May Lampe. Cut by F. C. Lampe. Excellent example for color plates, which may be arranged for five or six colors.

Artcraft Composition

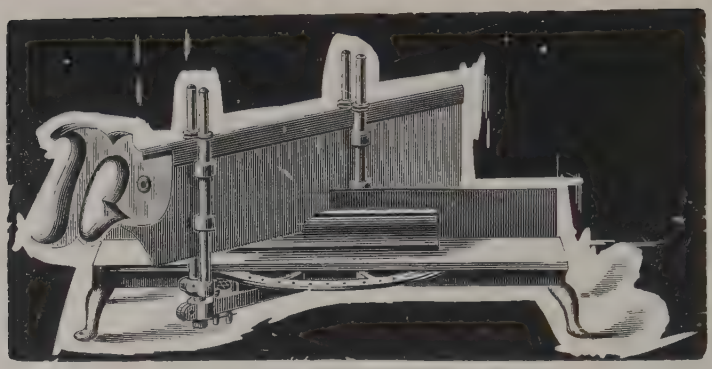
Pen and ink sketch drawn upon the block by May Lampe. Cut by F. C. Lampe. This is a good illustration for color plates—sky and water—which are easily made.

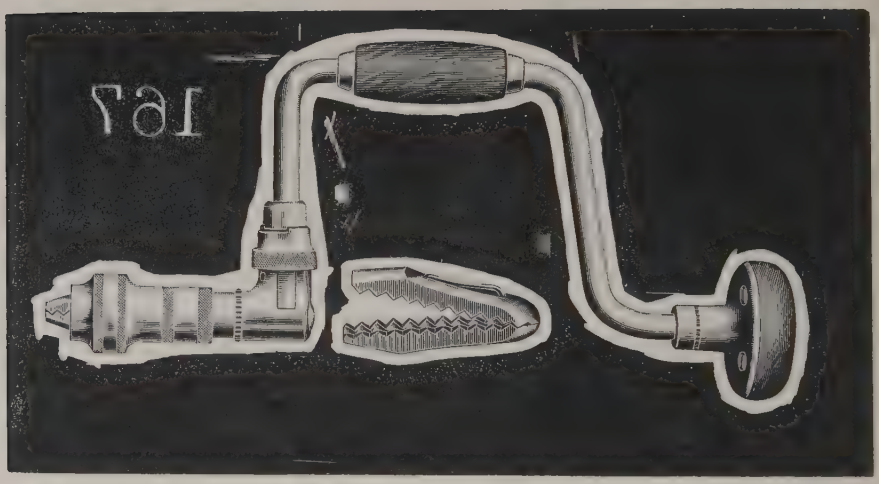
Wood Engraving Henry Wolf

The above reproduction is from one of Henry Wolf's finest wood engravings. Note the simplicity of line and how well it interprets the technique and brush work of the original painting. By means of the stipple, white cross lining and variety of tints the wood cut is supreme for the rendering of the different textures. By using a magnifying glass one is better able to study this remarkable wood engraving.

Drawing by May Lampe Wood Cut

Taken from Scribner's Monthly, 1876. Engraved by F. C. Lampe.





Two wood engravings made about forty years ago for Stanley Rule and Level Company's catalog. Much of the lining is machine ruled. The wood surrounding the engraving acts as a support for electrotyping.

Wood Engraving — Fred T. Larson

Mr. Larson is one of the outstanding Chicago artists, engraves as readily in wood, parazin or artcraft composition. He is an authority on color.

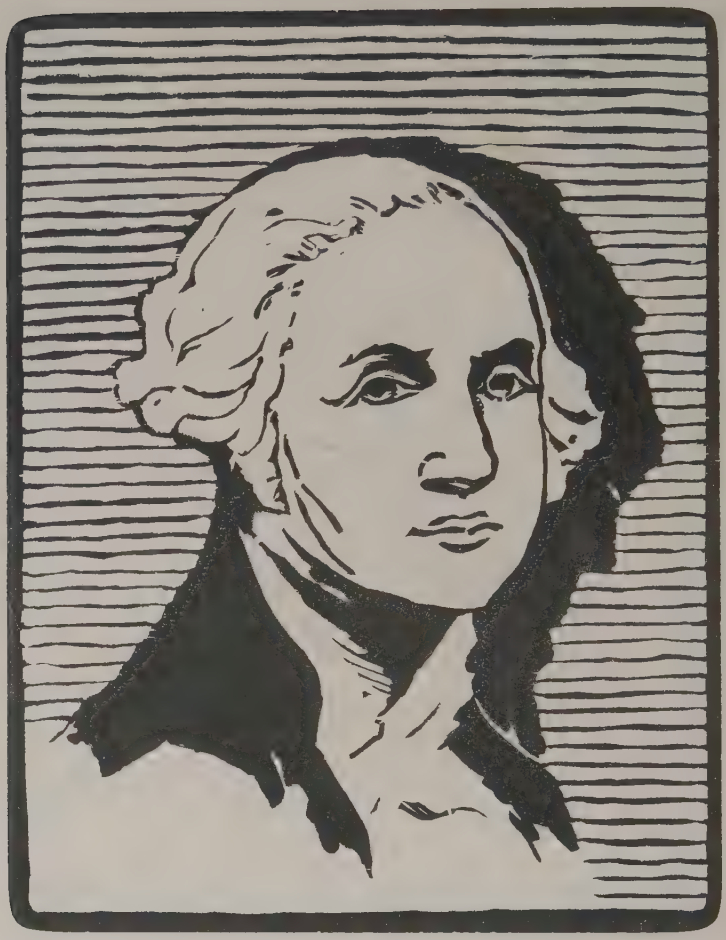
Parra

Republic Engraving Co.

This is a three-plate illustration, with four-color effect. The green is produced with blue printed over the yellow. The different shades of green are obtained by fine line treatment in the yellow plate. The company used this picture on their 1928 calendar.

Parazin — Fred T. Larson

Mr. Larson has produced this illustration in four colors, showing his artistic ability and skill in engraving. Only the key block is here used. The tint block, printed in chrome yellow, is Artcraft Composition.



Endgrain Maple

Drawn on the block with pen and ink by May Lampe and cut by F. C. Lampe

Linoleum Robert Lundgren

Drawing by May Lampe

Cut by F. C. Lampe

Endgrain Maple

Excellent color plates may be arranged by using this as the key plate

May Lampe · Box wood · Cut by F. C. Lampe

May be printed in four or five colors by using Artcraft for color blocks

Linoleum O. Romine

Suggestion for a Christmas greeting. Using this cut as the key block, printing leaves in green, the berries, the bow and the cat's tongue in red, an effective piece of printing may be had.

Wood Cut F. C. Lampe

May be arranged for four or five color blocks by using artcraft composition. Pen and ink drawing by May Lampe

Printed from a Parazin Plate with ordinary varnish ink.
Designed and engraved by Norman Kent.

Printed from Parazin Plates in two colors with water color inks.
Designed by Louis Ciarico, engraved by Claude Harris.

Printed from Parazin Plates in three colors with water color inks.
Designed by Louis Ciarico, engraved by Claude Harris.

Printed from a Parazin Plate with ordinary varnish ink.
Designed and engraved by Norman Kent.

Linoleum

Dave Singer

His first attempt at block cutting

F. C. Lampe

Smooth Linoleum — Robert Lundgren

Linoleum Roy Prange

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APPENDIX

The equipment needed for block work in the print shop consists of a supply of artcraft composition or linoleum blocks and a set of engraving tools.

The equipment needed for a school wishing to print blocks with a press is as follows:

Tracing paper, drawing paper, carbon paper, drawing ink, Chinese white, pencils, pens, ruler and thumb tacks. These supplies are needed for the drawings and transfers.

A set of engraving tools for each student, with slip stone.

Type-high blocks of linoleum or artcraft composition.

Printing inks. An assortment of colors in quarter-pound tubes.

Brayer, 6-inch.

Proof planer and mallet.

Safety benzine can.

Pilot or Ideal hand-lever printing press. Larger presses should be obtained if production is planned.

Small imposing stone.

Quoins and key.

Small cabinet wood furniture.

Manila paper and pressboard for tympan of press.

Spring tongue gage pins, dozen.

Dry proofing paper. Used in pulling proofs by hand.

Card cutter.